PC Update

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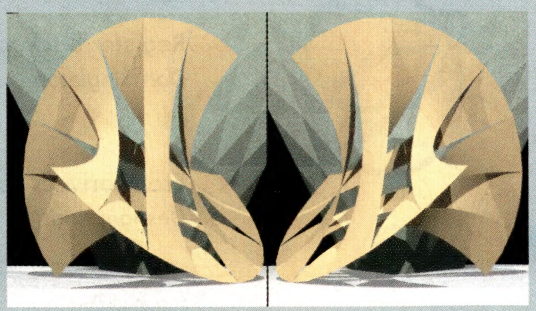
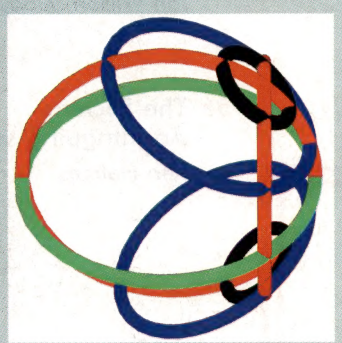
August 1999

Volume 16, Issue 7





MELB PC USER GROUP

Features

Genealogy
Programming
Privacy
Client/server security

Reviews

Books
PhotoMAX PDC 640 Digital Camera
Family Tree Maker Deluxe

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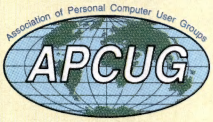

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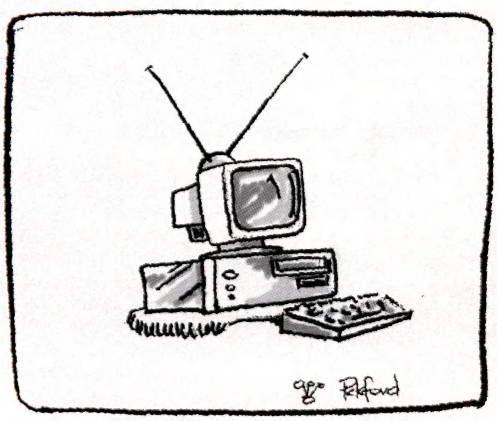
Are you unnecessarily boosting Telstra's profits?

A few years ago Melb PC had several BBS numbers. One of them was cancelled aver a year ago and Telsta has now allocated it to a new customer.

If your software is still set to dial 9699 6644, all you are doing is wasting your time, spending 25 cents and frustrating the poor chap on the other end, who hasn't learnt to speak "modem" (and doesn't intend to!).

Please check your modem settings—the only number to use for the Melb PC BBS is **9699 6611**.



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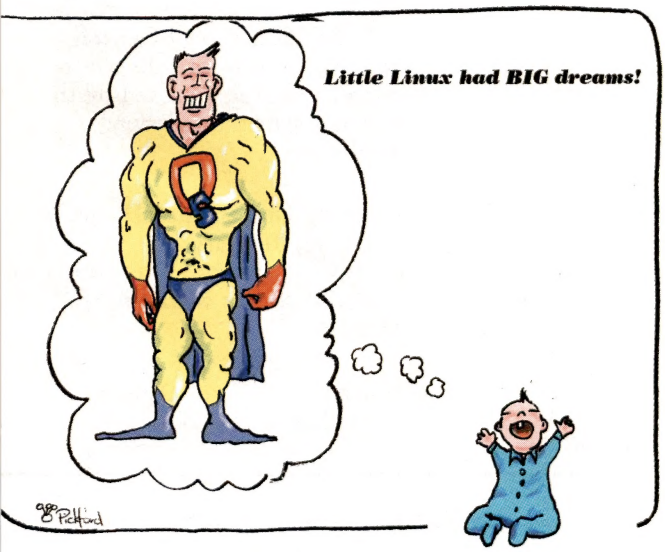

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Online Services
Melb PC BBS
(16 lines, up to 28.8 kbps)
9699 6611
Internet Service
64 lines, up to 120 mins total, per day, max 33.6 kbps **9686 4506**
60 lines, up to 120 mins total, per day, max 56 kbps (V.90) **8626 5000**
120 lines, up to 120 mins total, per day, max 56 kbps (K56flex)
9934 9400
Intranet Service
26 lines, 30/10 mins, extra if lines free, max 33.6 kbps **9690 5644**

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Before starting a review or article, write to the editor, in case someone else has beaten you to it. Then download, read and follow the style guide STYLAUTH.ZIP from area PCU.351 of the BBS. Note, anonymous submissions are not accepted.

Authors must present a balanced view of the subject matter, based on a reasonable period of use—if the article is overly critical they should submit a copy to the distributor or manufacturer for comment. Copies of such correspondence should accompany the submission.

Submitting articles and reports

Upload articles, reports and reviews to the BBS, as plain, unformatted (ASCII) text files or plain unformatted (ASCII) text files bundled in a ZIP file with accompanying graphics. Do not use long file names or upload self-extracting EXE files. Make sure you are in the PCUP file area, before you upload the file. Leave a message to All (not "Private") in the *PC Update* Discussion area. Submissions that conform to the above formatting requirements can also be sent by post, on a virus-free diskette, which will not be returned, to the Group's PO Box, or e-mailed, with attachments of less than 1 MB, to *pcupdate@melbpc.org.au*.

Editing. All articles are edited for style, spelling, grammar and length. Articles that may not be edited or that do not meet our standards, will be rejected.

Graphics. Supply graphics or screen shots, wherever possible, as colour, or black and white images, saved in one of the formats: TIF, BMP, PCX, WMF or EPS.

Rejections. Contact the editor if your submission is not published within four issues. Articles with long file names, self-extracting files or virus infections are rejected without notification. Other rejections are advised by phone or in writing.

EDITORIAL

Ash Nallawalla

I have enjoyed processing the *PC Update* survey results (see later in this issue). My task was relatively easy, as the survey software simplified the collection and basic analysis of the online submissions. Approximately 100-200 responses came on paper, and Stan Johnstone kindly offered to key them in for me. Thank you, Stan.

One writer hasn't noticed that Stan Johnstone hasn't been our President for some months; Morris Tobias is in the hot seat now.

E-mailed submissions OK

A country member wrote to ask if he can submit an article over the Internet. Yes, absolutely, whether you live in the country or in Melbourne. Send them to *pcupdate@melbpc.org.au*. Submissions from members are badly needed and I apologise for having to find material from other user groups.

Beginners

I have noted in a couple of letters and in some survey responses that some novice computer users need help. Each one of us has been there; many of us were fortunate to be trained at school, university or at work, but some have simply not had such an opportunity.

One of the country members in the Albury-Wodonga region has pointed out that it is difficult to get help from fellow members. He has the PC from hell and, among other problems, has gone through four faulty CD writers. Apparently, none of them has worked for long. I wonder if he has a bad batch of blank CDs or whether he has omitted some vital step in the CD creation process.

His PC reboots itself (power spikes?) and it seems that his hard drive has been scrambled (time for a disk-repair utility?). He bought a PC for his daughter-in-law and a Melb PC Internet subscription. The local PC supplier could not connect to our modems in 40 attempts (wrong phone company, cheap and nasty modem, pair-gain device in the line?) and signed him up to OzEmail instead. "Computing has always been like this, but where do you go for help?", he adds.

In general, beginners who find themselves in such a situation should consider the following advice. They should either treat the PC as an appliance and let the computer shop fix all their problems, or make a reasonable effort to learn how a PC works. If they seek free help, they should accept the advice as it comes. City members should visit our Special Interest Groups and air their computing problem. Country members cannot do so easily, so they should make a concerted effort to understand how to use the Internet.

Nearly every common computing problem has been solved by someone else and documented somewhere on the Net. By "the Net" I include the World Wide Web and newsgroups. Visit *www.deja.com* and use its Help menu to teach yourself how to search for something in an efficient manner. Similarly, pick a search engine and do the same.

One could write a book about solving such problems. I'd appreciate it if a member could submit a short article on each of these topics and similar ones.

Special General Meeting

The monthly meeting on Wednesday 1 September 1999 at the Pharmacy College, Parkville will include a Special General Meeting, starting at 6.30 pm to consider, and if approved by the meeting, pass the following resolution:

Motion: That Stephen Davies be made an Honorary Life Member for his outstanding contribution to Melb PC for his work on *PC Update*.

Moved: Carol Daniels
Seconded: Ash Nallawalla

Themes for 1999

September

Internet, Connectivity and Computer Telephony

October

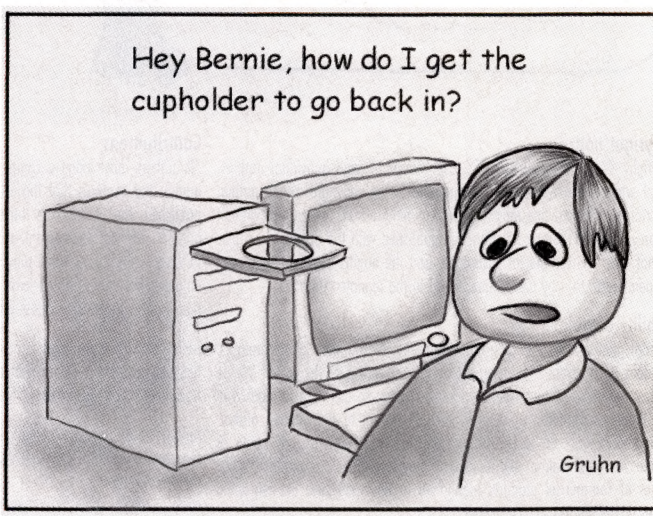
Controlling your computer,
Graphics, Imaging, Printing, and Multimedia.

November

Getting down to business

December

Portable and Remote Computing



PC (President's comments)

Morris Tobias

With the 1998–1999 financial year now over, it is again time to reflect on the performance of Melb C. While final figures are still some me away, it is already apparent that e have considerably strengthened our osition. Our thanks must go to all of ie volunteers within the group who iade this possible.

lembers' survey

esponses from the survey are now eing collated and the preliminary sults are not far away. Thanks to all iembers who took the time to articipate.

iternet

he extended time trial on our internet rvice has now been expanded even irther. To encourage those who are ble to access the service during quieter mes to do so, the access allowance is o longer counted in minutes, but in nits. Every user is entitled to a maxi- ium of 120 units per day. During peak mes, one unit equals 1 minute, ieaning there is no loss of access (120 iinutes is 2 hours). The new access lowance is as follows

Peak (4 pm to 2 am), 1 unit is equal to one minute

Off peak (8 am to 4 pm), 1 unit is equal to one and a half minutes

Night (2 am to 8 am), 1 unit is equal to ten minutes.

BS

lease remember that the BBS only has ne access number— 9699 6611.

C Update

C *Update* will soon be entering a new hase. We have an agreement with ational company Ziff-Davis for our iagazine to be published by them. Discussions are still in progress, but I an tell you that, in addition to your egular copy of *PC Update*, you will eceive a copy of *PC Magazine* free of iarge—more details of this later.

On behalf of the committee, I take this opportunity to sincerely thank our managing editors, past and present, for all their dedication and hard work.

Volunteer of the month

The volunteer of the month for July is Bob Mayston.

After 33 years in the chemical industry, including ten as a managing director, Bob was involuntarily retired at the age of 60 in 1983. Never one to be kept down, Bob started his own business, as was detailed in an article he wrote for *PC Update*, February 1999.

To assist his business venture, the basically computer illiterate Bob bought himself a Kaypro CP/M computer (remember those?) and joined the Kaypro computer club. A year later, Viv Martin introduced him to Melbourne PC User Group.

Bob has been a volunteer in the office for over four years, and can turn his hand to almost any task there. In addition to this, he is scribe for the Quicken and Windows Special Interest Groups, and has reviewed products for *PC Update*. □

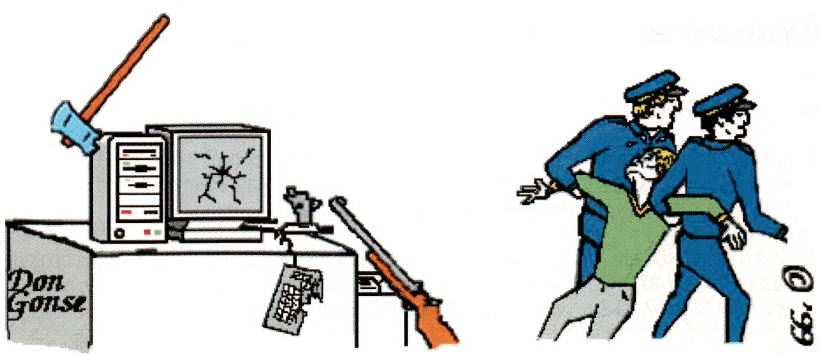
STOP PRESS

LUBe SIG people and anyone interested in Linux

Kenneth Bergenthal, Asia Pacific Regional Director, Caldera Systems, Inc. will address and take questions regarding **Linux** and **Caldera Systems** at a meeting to be held on Monday evening, 2 August 1999, at a place yet to be advised. See the MOTD or the BBS for the location.

Humorous Bits

by Don Gonse

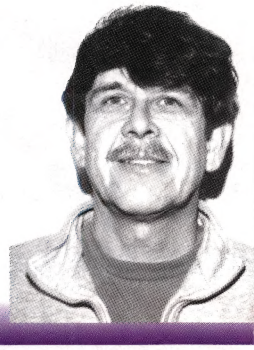


"It was either him or me, I tell ya!"

Cartoons free to User Groups with credit to Don Gonse.
Request images from Don at degonse@juno.com

SOFTWARE REVIEW

Douglas Agee, SWIPCC



Family Tree Maker Deluxe 10 CD Set, Version 5

Info Box

Family Tree Maker Deluxe

Minimum System

- 486 or faster CPU
- Windows 95/98
- 8 MB of RAM (16 MB recommended)
- 20 MB of hard disk space
- 2x CD-ROM
- 640 x 480 monitor

How many of you have been bitten by the genealogy bug? I was first "nibbled on" during a business trip to Washington, DC, 17 years ago. I still have vivid memories of the trip because I parked my rental car in a parking zone that expired late in the afternoon, and almost had a heart attack trying to get to it ahead of the tow truck.

The story goes something like this: A co-worker and I decided to visit the Library of Congress one afternoon to see if we could find a certain book in the genealogy library containing information on his family. I parked the car on Constitution Avenue near the Washington Monument and we walked to the library. We soon learnt that the book was not available, and because I had nothing better to do, I began searching through the catalogue for my family surname. To my amazement (and my friend's annoyance), I found a book that traced my family lineage to the late 1600s. I arranged to have the book microfilmed, with the intent of extracting pertinent information and entering it on family tree sheets at a later date. As I finished paying the clerk, my friend reminded me that parking was about to expire. We bolted from the library and ran a mile in business suits arriving at the car just ahead of the tow truck.

Today, this scenario is unlikely because virtually all of the information is available through online reference sources and compact disks. And, of course, there are excellent software programs like Family Tree Maker (FTM) to help organise and display the information.

you'll have a tough time finding a more versatile, feature-packed genealogy program

FTM greatly facilitates your search for ancestors and enables you to record and display genealogical information in a variety of interesting ways. The program is virtually a "one stop" genealogical resource centre, with so many features and capabilities that it would be difficult to cover them all in a single article. So I intend to hit a few of the highlights, first describing the program's research, data entry and display capabilities, then summarising the system requirements and peripherals you'll need to fully exercise the program's capabilities. Along the way, I'll tell you what information is available on the CDs included with the deluxe set. So let's begin.

CDs	Description	Contents	Use
1 & 2	Installation Program and Family Finder Index, A-Z	171 million names that appear in US Census Index, linked family pedigrees, family histories, selected state marriage record indexes, land records and other sources.	Locate ancestors and identify archival sources where more family information may be available.
3 & 4	Social Security Death Index, US 1937-97, Vol. I, A-L & Vol. 2, M-Z	55 million names of deceased SS recipients whose relatives applied for SS death benefits after their deaths. Contains birth date, place where SSN was issued, death date, place of death.	Verify deaths and death locations. Obtain potential leads for determining the locations of wills, obituaries and burials.
5 – 9	World Family Tree, Vols. 1 through 5, pre 1600–present	Over 27,000 family trees submitted by FTM users. Includes names, birth, marriage, death dates and locations.	Locate ancestors and obtain family lineages. Some of the people included in these trees are still living; hence, some information has been omitted because of privacy considerations
10	Selected US/International Marriage Records, 1340-1980	Marriage record information on 1.4 million people from 50 states and 32 countries. Extracted from family group sheets, biographies, electronic databases, and other sources. Produced by Yates Publishing.	Obtain full names of bride and groom, year of marriage, birthdates

Table 1

esearch tools

TM has an astonishing variety of esearch tools. If you're a novice, you in begin by reading the Genealogy How-To" Guide, an electronic eference you can access from FTM's Help menu. This guide provides a step-y-step description of how to collect nd organise genealogical information. he guide also contains several reference ools novices and experienced research-s will find useful in their search for ncestors:

A Research Directory lists the names, addresses and phone numbers of county, state, national and international agencies that have genealogical information. The directory also contains an extensive bibliography and reading list

A Family Finder Index lists thousands of individuals and identifies archives where more detailed information on these individuals may be found. The archival sources include Social Security records, census indexes, marriage indexes, church records, family history records and Family Tree records. Most of these archives are available on CD-ROM from Family Tree Maker at additional cost. The last source mentioned, the Family Tree records, is a collection of records on CD-ROM compiled by FTM from information provided by thousands of FTM users

- A dictionary defines hundreds of genealogical terms. This is particularly useful if you are a novice struggling with new and unfamiliar terms
- Sample form letters (in English, French, German, Italian and Spanish) are provided so you can request information from government agencies or institutions.

I found the "How-To" Guide well-organised, informative and convenient to use. While looking through the Family Finder Index, I found my father's name cross-referenced to several archives that could very well contain information extending family records back to the early 1600s. I made a note in the FTM Research Journal (a feature I'll discuss later) to obtain copies of these archives and scan them for pertinent information.

By now you're probably wondering what genealogical information is on the CDs included with the deluxe set. I've summarised this information in Table 1, which was extracted from the CDs.

Another valuable resource is the FTM Genealogy Internet Web site, Family Tree Maker Online (*http://www.familytreemaker.com*). Actually, you don't need to have the FTM software program to avail yourself of this resource—it is available to anyone who has access to the Internet. This site contains a Family Finder page where you can search for your ancestors. You simply type in the name of the person you're looking for and let the search engine go to work. When I visited the site, I searched for my great, great grandfather on my mother's side of the family and found him listed in the 1850 census records. I also searched for my great grandmother on my father's side of the family, but without success.

Data entry features

Entering genealogical information into FTM is fairly straightforward. To enter family data, you simply click on the Family Page button, then type in the names of the husband, spouse and children (and their birth, death and marriage dates) in the spaces provided. If you fail to capitalise proper names, a dialog error box will appear, prompting you to make appropriate corrections.

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Morris Tobias has been a member and long-time supporter of Melb PC since 1987. Hundreds of members have benefited from his expertise.

PC Update Readers' Choice 94 Winner

Winner of PC Update Readers' Choice Awards — Computer Repairer/Upgrader

PC Update Readers' Choice Awards 96 Winner

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On the Family Page, other buttons allow you to enter more detailed information on the husband, wife or children. For example, clicking on the More button will bring up a page where you can enter information on the individual's baptism, confirmation, education, etc. You can even write a long narrative about the individual's life.

Another feature I found interesting is the Scrapbook button, which opens a "scrapbook" where you can store picture, audio and video files. This is a good place to include scanned photos or audio/video clips of important events like weddings, baptisms, or anniversaries. Storing photos in the scrapbook is easy. Just click on the Scrapbook button, highlight the space where you want to store the picture, click on the Picture/Object menu, select the picture file you want to import, then open the file. Before you put the picture in the scrapbook, you can rotate or flip it to the proper orientation. FTM supports four file formats: Windows Bitmap (*.BMP), ZSoft Image (*.PCX), Tagged Image Format (*.TIF) and JPEG Interchange Format (*.JPG, *.JFF)

Another feature of FTM—one that I mentioned earlier—is the Research Journal. By clicking on the Journal button, you can open a journal page where you can enter notes that relate to your research, including a detailed list of tasks you need to perform and/or references you need to check out.

Display and printout capabilities

FTM provides myriad ways to display your family information:

- By clicking on the Ancestor or Descendant buttons, for example, you can display standard family trees of your ancestors or descendants respectively
- By clicking on the Hourglass button, you can display a family tree shaped like an hourglass that shows both your ancestors and descendants
- By clicking on the various Report buttons, you can display a variety of different types of reports
- By clicking on the Book button, you can create a family book complete with a table of contents and chapters on all of the individuals in the family tree. You can write the book using FTM's built-in word processor or import the story from another word processor. Actually, "import" is a little misleading because you first have to copy the story to the clipboard, then paste it into your book. You can illustrate the book with family tree charts and/or photos from the "scrapbook".

FamilyTreeMaker.com

The largest and most complete online genealogy resource

While I was investigating FTM's display capabilities, I began to wonder how many generations I could include in a family tree, and how large, in terms of physical size, I could make the tree. To find the answers, I had to check the FTM User's Tutorial and Reference Manual. The manual is over 500 pages in length but fortunately has a good index.

The answer to the first question depends on the type of family tree being displayed. A single "fit-to-page" tree can show only six generations. Descendent, ancestor and hourglass trees, printed on multiple sheets of paper, can show 99 generations. Descendant trees containing only "outline" information can display 250 generations.

The answer to the second question surprised me. Would you believe 800,000 by 800,000 inches? Yes FTM fans, you can make your family tree large enough to wallpaper the inside of your house several times or cover the inside of the El Paso County Coliseum. I would advise against this, however, not only because it would entail great expense, but also because your family members might think your behaviour a bit bizarre and have you committed.

System requirements and peripherals

As well as the basic hardware (see Info Box), to print your family trees, reports and books, you'll need a good inkjet or laser printer.

If you want to store photo, audio and video files in the "scrapbook", you'll need to have peripheral devices to create the files. You can create photo files in several ways:

- You can take pictures with a digital camera and store the files on a floppy disk (or on the computer's hard disk)
- You can digitise prints or old photos with a flatbed scanner and store the files on a floppy or hard disk
- You can have a commercial photo-finisher put your photos on a CD.

And, of course, to create video and audio files, you'll need a video capture board and sound board.

This may sound like of lot of extra equipment, but you'll need it to get the most out of your FTM program. Fortunately, the multimedia computer systems sold today already include most of these devices, and sometimes a package deal even includes a flatbed scanner. So, if your current computer system is deficient, here's your excuse to buy a new multimedia system. And, if you decide to buy a new computer, why not pick up a digital camera also? You can get a "low-end" camera (640 x 480 pixels) from most mail order house for less than US$250. Also, if a scanner is not included in the package deal, you can pick up a 300 dpi scanner for between US$50 and US$70 (after manufacturer rebates).

One last note

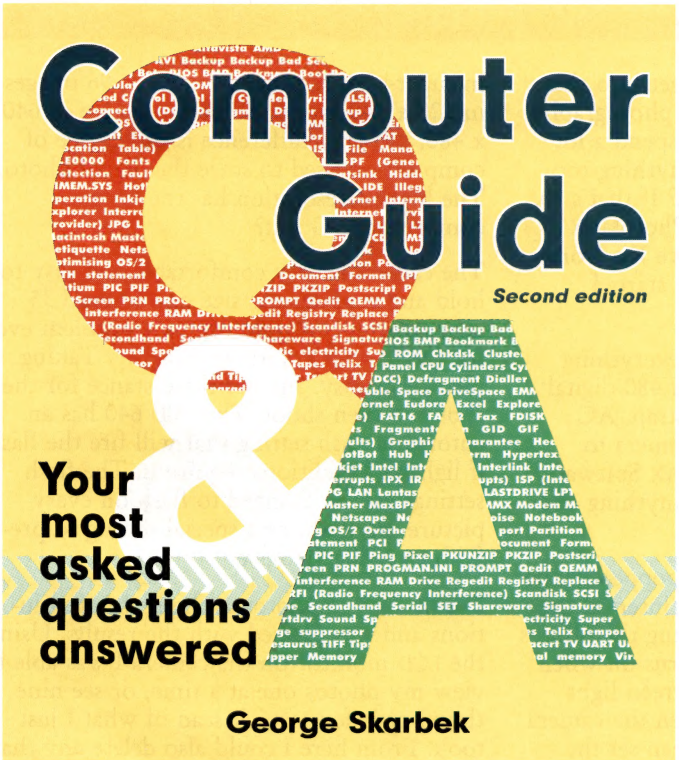
Be forewarned that FTM has the potential to consume huge amounts of hard disk space, especially if you store a lot of picture, video and audio files in the "scrapbook". I occasionally received error messages warning me that I was running out of hard disk space, and was advised to close programs or free up additional space. This was a little disconcerting, but I learned a valuable lesson: I should have installed FTM on my 3.2 GB hard drive instead of my 420 MB drive.

The bottom line

What's my assessment of FTM? I have only good things to say about the program. The menus are well designed and data entry is straightforward. I'm impressed with the embedded and online genealogy resources and with the "scrapbook", reporting and book publishing features. At a street price of around US$80, you'll have a tough time finding a more versatile, feature-packed genealogy program.

This article was reprinted from the December 1998 issue of Throughput, *the Journal of the SouthWest International Personal Computer Club.*

Your most asked questions answered



George Skarbek, voted favourite author by *PC Update* readers in 1997, has written a second edition of his book *Computer Guide — Your most asked question answered.*

This book is based on material published in the weekly "Q&A" column in the computer section of *The Age*, *The Sydney Morning Herald, The West Australian* and *The Courier Mail*. Also included are comprehensive articles originally written for Melb PC's award winning magazine, *PC Update.*

The questions and answers have been collated into 19 chapters and many answers have been considerably expanded. This edition has been extensively updated since the publication of the first volume in 1996. Numerous cross-references simplify searching, and several extensively researched articles are included.

Even if this book fixes only one nagging problem, it will have been worth buying

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Over 100 hints and tips have been added in this edition, as well as over 50 screen dumps

This book is aimed at everyone interested in personal computing, from beginners to experienced users, covering such broad fields as:

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Polaroid PhotoMAX PDC 640 Digital Camera Creative Kit

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The PhotoMAX PDC 640 Digital Camera Creative Kit from Polaroid

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- 70 MB hard disk space
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- Available serial port
- 256-colour monitor
- Mouse.

For more information visit Polaroid's Web site at *http://www.polaroid.com* and go to the Products/ Digital Imaging Solutions/ Digital Cameras section.

So you're ready to get into this thing called digital photography but don't want to spend a lot of money or get anything too complicated. Right? If that's so, you should take a look at the PhotoMAX PDC 640 Digital Camera Creative Kit from Polaroid. It's a great way to get started without hurting your wallet.

First of all, the kit comes with everything you need to get started. A 640 x 480 digital camera with carrying case and strap, AC adapter, cables to connect the camera to your computer or TV, PhotoMAX Software, and batteries. You won't need anything else except a computer.

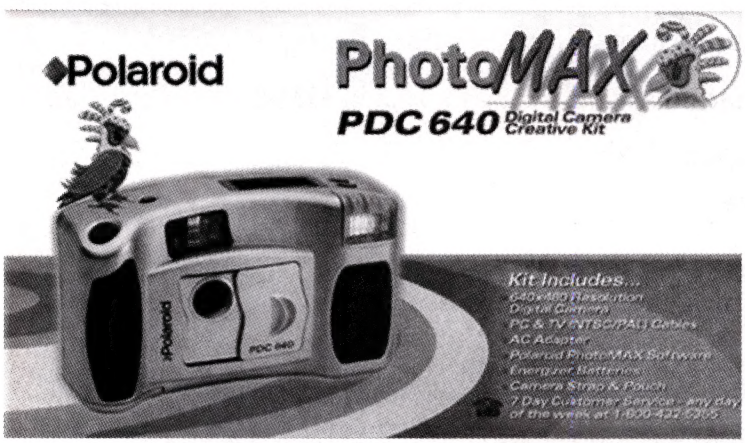
Getting started was easy. I just popped in the four AA batteries provided and inserted the 2 MB SmartMedia card for storing the photos and I was ready. The camera turns on when you open the lens cover and a green light comes on in the viewfinder when the camera is ready. For initial setup, you can set the date and time in the camera for date stamping each photo. The camera comes with a 45-mm LCD monitor on the back so you can see what your photos look like before and after you take them. To conserve battery life, you can simply use the optical viewfinder and use the monitor only to view the photos later.

You can take photos from as close as 150 mm to infinity using the three distance settings for macro, close-up and normal. The 2 MB SmartMedia card will store from 12 images in super-high resolution mode to 96 images in 320 x 240 mode. Three modes are in 640 x 480, the only difference is the degree of compression used to store the digital photo. The highest resolution has the lowest compression. Got it?

The camera is very comfortable and easy to hold and is about the size of a normal 35 mm camera. It should not be a problem ever for the youngsters in your family. Taking pictures is easy. Just set the distance for the shot and then shoot. The PCD 640 has an automatic flash setting that will fire the flash if lighting conditions require it. The flash settings can be changed to flash on every picture, no flash, or a special setting to pre-flash to reduce red-eye.

I took a lot of photos at the higher resolutions and was pleased with the results. Using the LCD monitor on the camera I was able to view my photos one at a time, or see nine thumbnails for a quick scan of what I just took. From here I could also delete any that I didn't want, and more importantly, I could "lock" any photos I wanted to make sure that didn't get deleted. Nice feature especially if you plan on having children use the camera.

After installing the cable from my computer serial port to my camera, and connecting the AC adapter to the camera to save on battery life, I was ready to transfer my photos from the camera to my PC. The included PhotoMAX software from ArcSoft also instal the Twain driver needed to make everything work properly. The software allows you to select any or all of the images from the camera, then transfer them to albums on



Polaroid

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Digital Camera Creative Kit

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Ray Majeski,
SWIPCC

our PC for editing. Now, sing the PhotoMAX software, ou can change many of the tributes of the photos such s brightness and contrast, nd do image cropping to get ne photo just the right size nd shape you want. You can so do special effects like mboss, splash, mosaic, and nake it look like a painting. With PhotoFantasy (included) ou can put a photo of your ace on the body of sports thlete, ancient artwork, or nagazine covers. Using ticker Store (also included), ou can make all kinds of ickers, badges, T-shirt esigns and cards with the hotos you just took with our camera. I must say, this a lot of stuff packed into ne box.

he best part I haven't even lked about yet. The price. he suggested retail price for verything is only US$299! lard to believe. But every- ning I talked about above is ncluded for that price (no oubt you can find it for ss). This is a great entry- vel package to get started ith in digital photography. I ecommend it for anyone ho wants to try out their kills in digital photography or family use or to develop a ebpage at minimal costs. ou don't have to spend a lot o get a lot with the Polaroid hotoMAX PDC 640 Digital amera Creative Kit.

his article was reprinted from e April, 1999 issue of hroughput, the Journal of the outhWest International ersonal Computer Club.

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Ken Holmes

The Hypersphere: Into the fourth dimension

In the July issue we looked at the Hypercube, but the Hypersphere provides a quite different experience. Again, we will start off in 2D, but with the unit circle comprised of all points at unit distance from the origin. Mr Pytho Goras tells us that x squared plus y squared equals 1 (or 1 squared for those pedantic souls).

Moving on to 3D, the unit sphere is again all points at unit distance from the origin and that clever gentleman can show that $x^2 + y^2 + z^2 = 1$. The sphere doesn't have convenient edges to draw so we will use great circles, like the equator or the longitudes, or perhaps others like the latitudes.

Progressing to 4D, we can define the unit Hypersphere as all points meeting the equation $u^2 + x^2 + y^2 + z^2 = 1$. The real unit sphere is, of course, a special case where u = 0, and we could start by drawing circles on it, then proceed to rotate real axes with the unreal axis to move into the fourth dimension. We will only see the effects on the real co-ordinates and any point on the original surface can "lose" real values to the unreal co-ordinate, ending up anywhere inside the 3D sphere, i.e. every point in the (solid 3D) sphere is a point on the 3D hypersurface of the hypersphere. Plotting only the three real co-ordinates is effectively an orthogonal projection of a 4D point onto 3-space. Unreal rotations distort the circles to ellipses but they can never move beyond unit distance from the origin.

For Figure 1, we treated all axes even-handedly by using the intersections with the planes of the six possible pairs of axes. Let us call them "equators". The three real pairs give circles but the three pairs involving the unreal axis initially give diameter lines since only the real axes co-ordinates can be plotted. Unreal rotations open up these lines to ellipses (while squashing down the real circles) as the unreal values are traded with real values. The figure is intriguing in that it is not the sort of arrangement you a likely to dream up thinking only in 3D. Note that there are eight points, which started off as ±1 on each of the 4 axes, and which each have 3 ellipses (of the six) passing through them. The animated stereo program allows all rotations and the colourful results with screenclear off, but it was used to write a file for the POV-Ray tracing shown here, replacing lines with more substantial rings.

For the other Figures, we are going to desert the simple orthogonal projection and use a perspective projection in the fourth dimension to make the pictures more exciting (as was mentioned in the Hypercube article). In Figure3, we can see that if we project from the point u = +1.05 on the u axis, onto the (3D) hyperplane u = 0, any point, such as P1, acquiring a high u value, say + 0.5, will seem close and all three of its x, y

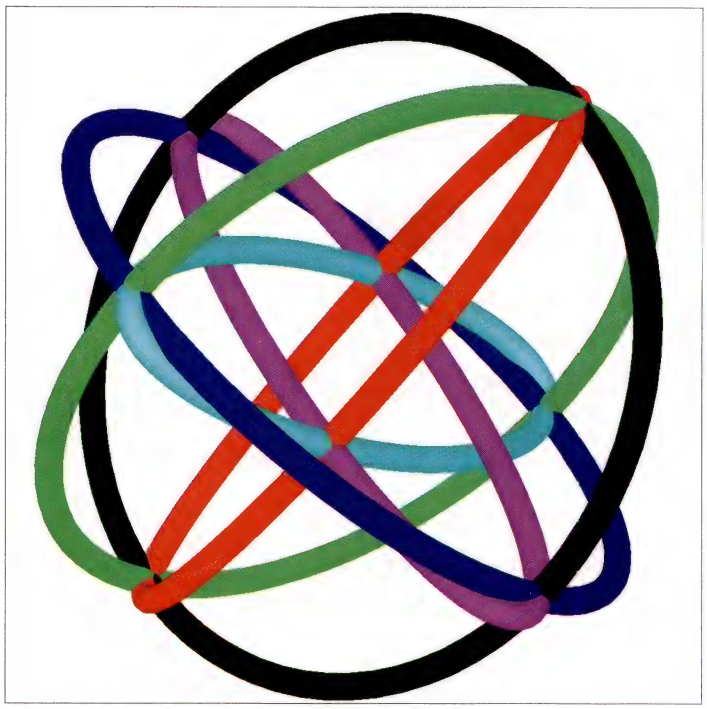


Figure 1 Six "equators". Orthogonal projection

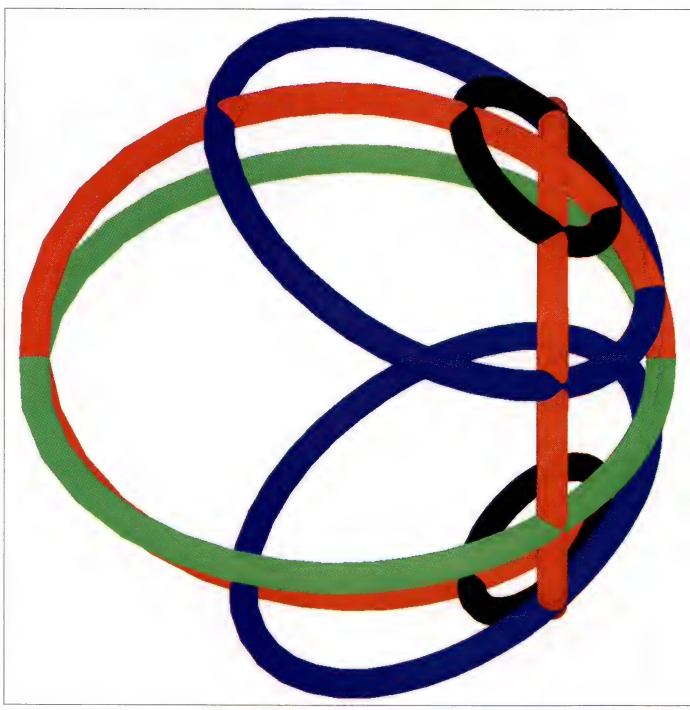
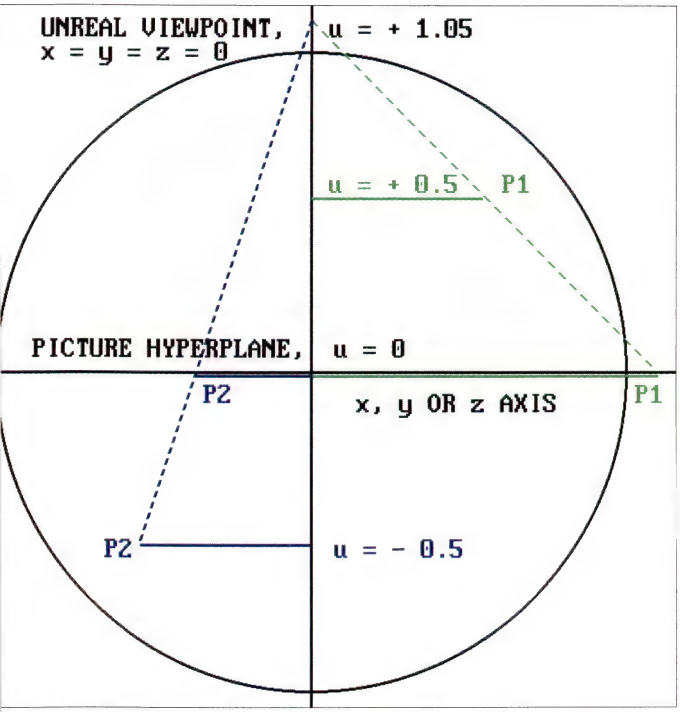


Figure 2 With 5 latitudes, 2 longitudes. 4D perspective



ıure 3 Doing perspective projection in the 4th dimension

d z values on the picture rperplane will be enlarged. ; diametrically opposite ›int on its circle, P2, will ve a u value of –0.5 and its three real values will all seem about a third as big because it will seem further away (in 4D). This makes a circle bulge out on one side; in fact, it becomes an ellipse with one focus at the origin —no surprise to anyone familiar with conic projection.

With Figure 2, we started on the real sphere only, with four latitudes, the equator and two longitudes at right angles at the poles; an unreal rotation of the x and u axes transferred some x values to u values giving the distortion seen in this raytracing. The leftmost points acquire positive u values at the expense of the x values so it bulges out from the centre due to the magnification of x, y and z by the 4D perspective. We also see it here as an object in true 3D perspective thanks to the raytracing process. It is not a particularly attractive shape but it does allow the unreal values of all points to affect the result.

With a 3D sphere, we can take just one great circle and, with a rotation of 180 degrees about any axis in its plane, explore the whole surface, in the sense that every point can be swept over. Likewise, with the Hypersphere, we can use only one circle, but it would need an infinite number of real and unreal rotations to sweep every point on the 3D hypersurface. Still, we can simplify to one circle and immediately recomplicate it by rotating it, without clearing the screen, to see where it goes and to produce some shapes which are attractive.

The program

Listing 1 takes the form of a continuously running demo. A single great circle is cycled through rotations, of the three pairs of axes involving the unreal one, through a little more than 360 degrees to provides progressive phase shifts. The screen is only cleared for the start of each rotation mode, so we see the distorted circle drawn at 10-degree rotation intervals. As

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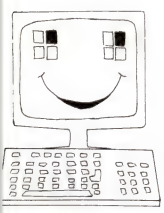

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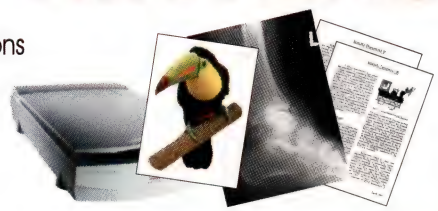

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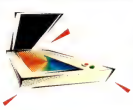

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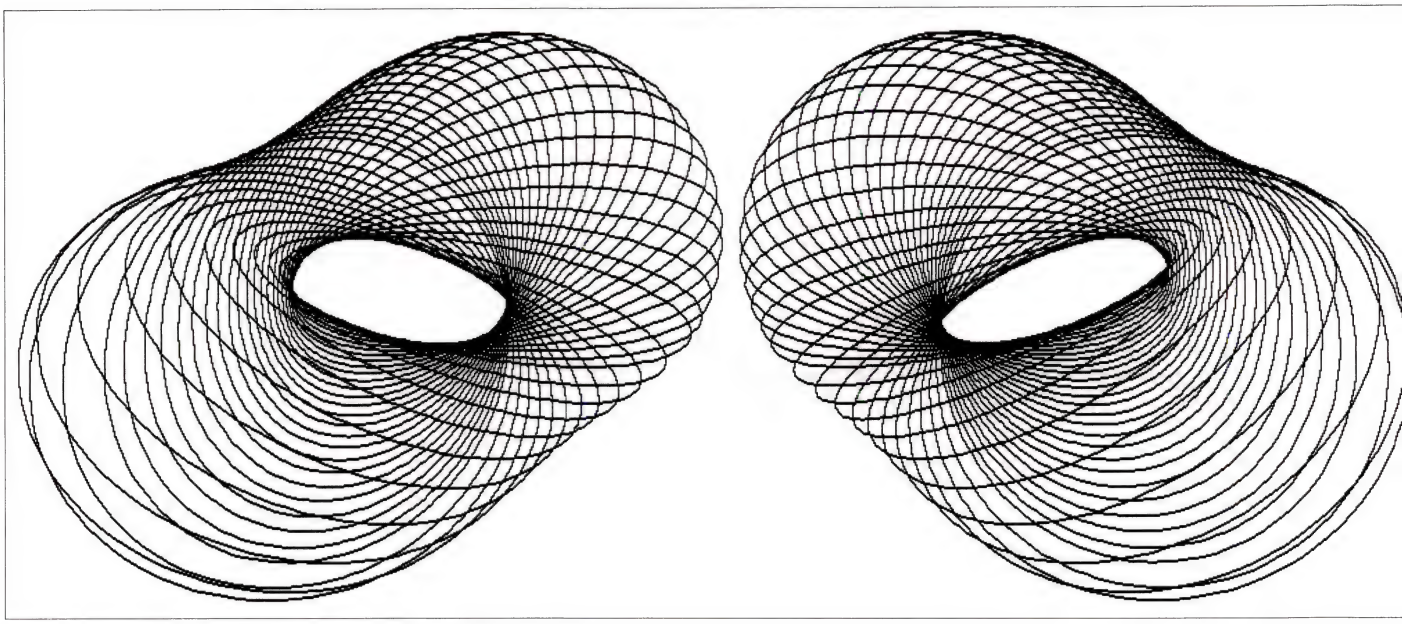

Figure 4 One equator with unreal rotation. 4D perspective

only one real co-ordinate changes in these rotations, an orthogonal projection would just produce elliptical tubes, but, with 4D perspective, the distortions of distance from centre give toroidal shapes which are pinched to various degrees at two diametrically opposite points. Figure 4 is a stereo pair for viewing with a mirror and you may note that the individual ellipses all encircle the hole, generating the elegant shape by a sort of rocking and rolling motion. Running the demo. will show shapes with all degrees of "pinching", from none to complete.

The 640x480 VGA screen mode is used as we don't need EGA 2-page animation, used for the hypercube, but will be drawing on the visible screen. The origin is placed in the centre of the right half where the figure will rotate and the left half can accept the flipped left-eye view. We use 0, 1 and 2, which are easily cycled, for the variable "rotate" to choose which mode of rotation occurs. The only keys recognised are "p" to pause and view a figure you want to examine, or "Esc" to end it all.

HYPRSPHR.LZH will be on our BBS, containing the .BAS and .EXE files for the programs used to produce all these figures.

```
'HYPSPDEM. BAS Demo with 4D perspective
 'Rotate circle about real/imag. axis pairs
DECLARE SUB rot (a, b)   'serves axis pairs
DECLARE SUB plot ()        'plots on screen
DIM SHARED pt(200, 3) '200 points on circle
DIM SHARED sn, cs  'sin/cos(rotation angle)
DIM SHARED axes AS STRING * 5
pi = 3.141593: pi100 = pi / 100
              'Now unit circle in x/y plane
FOR m = 0 TO 200: ang = m * pi100
   pt(m, 1) = SIN(ang): pt(m, 2) = COS(ang)
NEXT
ang = pi / 18: sn = SIN(ang): cs = COS(ang)
start: rotate = 0
SCREEN 12                'VGA screen 640x480
WINDOW (-9.6, -4.8)-(3.2, 4.8)
DO: count = count + 1          'start looping
 IF count = 38 THEN              'reset count
   count = 0: k$ = INKEY$       '& check key
   IF k$ <> "" THEN ky = ASC(k$)
   IF k$ = "p" THEN               'p to pause
     DO: LOOP WHILE INKEY$ = ""
   END IF
   rotate = (rotate + 1) MOD 3: CLS  'cycle
 END IF
 SELECT CASE rotate  'current rotation mode
     CASE 0: CALL rot(1, 0): axes = "x & u"
     CASE 1: CALL rot(2, 0): axes = "y & u"
     CASE 2: CALL rot(3, 0): axes = "z & u"
 END SELECT
 CALL plot
LOOP UNTIL ky = 27    'until Escape key hit
END
SUB plot  'right & left eye plots on screen
 c = 15                      'colour of lines
 LOCATE 1, 20: PRINT "Rotating axes "; axes
 FOR m = 0 TO 200'use 4D perspective factor
  f = 1.05 / (1.05 - pt(m, 0))
  x = f * pt(m, 1): y = f * pt(m, 2)
  z = f * pt(m, 3)       'and apply to x/y/z
  fz = z / (z + 20)     'z factor for stereo
  xr = x - (x + 1.6) * fz    'right screen x
  xl = -6.4 - x - (x + 4.8) * fz    'left x
  yb = y - y * fz            'both screens y
  IF m > 0 THEN    'no line to first point
   IF xr >-3.2 THEN LINE (xs,yc)-(xr,yb), c
   IF xl <-3.2 THEN LINE (xm,yc)-(xl,yb), c
  END IF      'now save starts for next line
  xs = xr: xm = xl: yc = yb
 NEXT
END SUB
SUB rot (a, b) 'a&b are any pair of u,x,y,z
 FOR m = 0 TO 200 'rotate circle 200 points
       temp = pt(m, a) * cs + pt(m, b) * sn
   pt(m, b) = pt(m, b) * cs - pt(m, a) * sn
   pt(m, a) = temp           '= new pt(m,a)
 NEXT
END SUB
```

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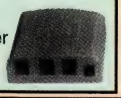

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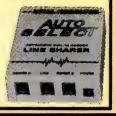

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Peter Smith

Farewell

This is the last is *PC Update* that I will be producing. In May the Committee decided to call for tenders to edit and produce our magazine and the advertisement appeared in the June *PC Update*, and elsewhere.

American-based publisher, Ziff Davis, is the selected tenderer—in the future your *PC Update* will be included with *PC Magazine*.

Some years ago a previous Committee proposed a similar idea. Then I ran a campaign to keep the magazine within the Group. It was successful and, with my team of supporters, won the August 1992 elections with 92 percent of the vote. (Much of life seems to run in seven-year cycles.) *PC Update* had just been voted "Best User Group Magazine" —since then it has won awards every time Ash or I entered it in the competition.

I've been involved with *PC Update* continuously since 1990—even Ash took a break while he was job hunting in 1998—so it it'll seem strange, at first.

I won't miss:

- The ten or more consecutive 16- to 18-hour days leading up to the printing handover
- The perennial scramble to find enough material to fill each issue
- Advertisers who change their ads, after handover, but just before printing
- All those who believe that "deadline" means "target" and missing one is not failure.

I'm looking forward to:

- A surprise when I open *PC Update*
- More time for my family and business
- Catching up on dozens of unfinished community and personal projects
- My phone, paper and toner bills dropping by up to 75 percent.

I will miss:

- Working with those contributors determined to learn and improve their submissions and the subeditors and readers who help them
- The camaraderie with contributors intent on giving something back
- The satisfaction of overcoming all the deadline woes and last-minute change and still delivering *PC Update* on time.

So, what now? No, no campaigns (been there, done that). Lots of writing, teaching, programming, other DTP work, horse riding, playing with the grandchildren and the PC.

My major American client is pleased that I will have more time for his work, I may even get to visit him!

Although I won't be playing an active role in Melb PC, I'll continue to "lurk".

My sincere thanks go to all those, both in and outside Melb PC, who have made working on *PC Update* a pleasure over the last ten years.

Good luck and goodbye.

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The dealer's stamp on the membership form will ensure his commission is paid directly to him from Melb PC.

No experience necessary – anyone can do it!

What's in it for you?

- Free extension of your membership (nothing could be nicer)!

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- $10 commission on each new member
- Melb PC will help reduce his support requirements (and they all would like that).

How do you start?

- Ring the office on 9699 6222
- Nominate your preferred area and the number of dealers you will cover.

Melb PC: Users helping users

David Winter

More on overclocking

As the owner of a Celeron 300A (Malaysian) running 450/100 on an A-Open AX6BC Pro motherboard with certified PC100 DRAM, and of a Mayalsian Pentium II 333, which will ***only*** go 400/100 and a Celeron 333, which couldn't stably boot up at 500/100, may I respond to George Skarbek's article on Overclocking (*PC Update*, July 1999).

I had my system set up by a major supplier to Perth's high-end gamers and users of demanding business graphics applications. It is skilled in getting maximum performance out of systems.

I was setting up a video editing system using a Promise FastTrak RAID0 array fitted with four 20 GB WD 5400 rpm UDMA-33s) and a Canopus DVRaptor edit package—on PCI bus. My VGA card is also PCI, as is the sound card.

These are costly PCI cards, though none to my knowledge use Intel chipsets.

The main alarm I wish to raise is George's suggestion to start with 83 MHz FSB. The problem is that the PCI bus bears a unitary multiplier relationship with the FSB. Thus at 66 MHz, the PCI bus runs 33 (2:1) and 100 is 3:1. Unfortunately 75 and 83 overclock the PCI bus (37.5 and 41.5 respectively, compared with 33) which is potentially more costly and harmful than overclocking the CPU. I understand that Intel chips are particularly vulnerable to overclocking and are easily cooked.

I would suggest, as did my vendors, that one should try 100 FSB—if it runs, then get the voltage adjustments right for stability and work on the cooling. I have 4 case fans (as much for five 20 GB HDDs as the CPU).

Overclocking the PCI introduces many rather unpredictable components unlike the well-charted course of overclocking CPUs.

Another important point is that some CPUs, like many Pentium IIs, lacked multiplier locking, so they can be raised to 100 FSB to utilise PC100 SDRAM and the FSB at its full potential while only moderately clocking the chip itself.

About the author

David Winter is a member of the Perth PC User Group and is co-founder of WA Desktop Video SIG. ❑

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Computing for the whole family

Bernadette Houghton

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probably know

more about

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Computers can easily transcend age, illness, ability and interests but, just as easily, they can isolate family members from each other. It's so easy to become engrossed in what you're doing on the computer, you forget to pay attention to what's happening around you. And sometimes it's hard not to look upon the computer as a babysitter, keeping the kids out of mischief while you get on with other things. The challenge for families today is to ensure that computers add an enriching dimension to lives that are already well filled with school, work, sport and a multitude of social obligations. And if you handle things right, the computer can truly be a means of bringing your family together, both emotionally and socially.

Computers and family togetherness

First, let's deal with the range of things you can do together as a family. The whole family can get involved in creating projects on the computer. Party invitations, Christmas cards, personalised photo albums, family diaries and genealogical trees are just a few suggestions. If your family loves tennis or cricket, travel or crosswords, music or maybe even bootscooting, the chances are that there are programs out there covering those interests. And don't forget games! Few things foster closeness better than shared interests, and using the computer this way adds another dimension to that interest.

If you have Internet access, you can surf the Web together and make e-mail a part of your life. Each person can have his own e-mail friends, but, as I've found in my own family, friendships formed through e-mail by one person can easily extend throughout the whole family and waft over into "real life". One of my family's closest friendships began when I met someone through a parenting mailing list. Our children began to send each other electronic cards, pictures and messages and eventually we began exchanging visits. What started as an e-mail friendship has now extended to a real-life, whole family relationship.

The Internet is a really great way to keep in touch with family and friends. Apart from e-mail, you can look up the Web sites of the people you know and the places they live, and exchange digital photos or videos. Family mailing lists are simple to create and maintain, or you could use a Web page to keep your family and friends updated on what's happening in your life. If you prefer real-time contact, chat sessions are easy to establish, and video-conferencing is another option.

Homework and study projects offer another way of fostering closeness between children and parents. These days, it's a rather different learning scenario compared to what it used to be, with more emphasis on independent learning and knowing how to find material. Parents can easily feel out of their depth, but with the huge range of resource material available on electronic encyclopaedias and the Internet, there is no reason they can't get involved too.

The digital generation gap

These days, your kids probably know more about computers than you do. Although, I hasten to add, since you're reading this nerdy computer magazine, it may not be quite so true of you and yours. If your kids are more computer literate than you, get them to teach you what they can. Hopefully, you'll come to see a different side of your kids and get a better relationship out of the deal. Besides, the more you know about computers, the better off you'll be in today's technocentric world.

Making the computer a focal point

If your computer's a family computer, where's the best place to put it? Tucked away in an office or bedroom, it probably won't be used to its full potential. Put it in a highly visible place such as the corner of the kitchen or the family room and the chances are it will get more use. Besides, you'll be better able to keep an eye on what the kids are doing. If you have Internet access, you'll probably be worrying about preventing your children from accessing seedy or forbidden material, particularly since none of the barrier programs such as Net Nanny are totally effective. Apart from locating the computer in a populated location, you can control your kids' Internet access by disabling automatic Internet logon and keeping the logon password to yourself. Alternatively, if you have an external modem, you could disconnect and either hide or lock it up when you don't want the kids accessing the Net. Of course, when they're at a friend's house, that's a whole other problem.

One of the possible drawbacks against locating your computer in the kitchen or family room is the noise. Imagine trying to watch TV or listen to music against the background of clangs and bangs as your teenager plays Doom. Just grab a pair of headphones and attach them to your computer—they're cheap and effective. What? Two people want to play the computer? Then, stick the headphones on the TV or CD player. What, there aren't enough headphones to go around? Apart from loudly yelling out "compromise, compromise", I'll keep out of that one!

If your children are teenagers with their own computer, they might not be quite so appreciative of the kitchen as a locale, so you'll have to compromise in some way. On the other hand, one of the highest compliments teenagers can offer their parents is to invite them into their room. If your child is inviting you into his room to use the computer, you must be doing something right!

Giving everyone a fair go

Squabbles over who gets to use the computer are inevitable—even if you're lucky enough to have more than one computer. Chances are that if you have multiple computers, one is faster and more souped up than the rest, and with more attractive software. A partial solution to this dilemma is to network your computers; this doesn't have to cost much and you can even buy software to enable multiple computers to use a single Internet connection. If there are still arguments over who gets to use what when, maybe a timetable would work for your family, with each person booking time to use the computer. If you're using Windows 95 or later, you can reduce the squabble level a bit further by setting up each family member with his own desktop.

Preventing the square eyes

You don't want the kids superglued to the computer their every free moment, so you might have to set some boundaries. You'll have to determine what best works in your family, whether that be daily time limits, requiring homework to be completed first or whatever. In my own family we discovered that the kids are pretty much stuck to the computer for the first couple of days after receiving new software, but things get back to normal after this. So, we simply restrict their computer use in the morning before school, and allow them free rein at other times (except when *PC Update* deadlines are looming!). It works well for us. Sure, there are times when the kids are at the computer most of the day, but those days don't happen very often, and the kids manage to balance a range of activities pretty well the rest of the time.

Housekeeping

What about those boring and mundane tasks such as backing up and defragmenting? Who does them? Yes, I'm assuming ***someone*** does! Is each person responsible for making his own backups, is it a communal responsibility or an allocated chore? Do think about this one.

And so, to end

Family computing isn't always easy, but there are many rewards—increased closeness, better understanding of each other, family fun and games, the odd practical joke and, hopefully, lots of happy memories to look back on.

Acknowledgements

Thanks to Pauline Davis for a beefy—and thought-provoking—discussion on families and computers. ❑

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Keit
Phillip

QBASIC and the "Figure it Out" puzzle — Pa t 2

```
'            CHANGES TO THE QBASIC PROGRAM DESCRIBED IN PART 1
'
'   THERE ARE THREE CHANGES TO ADD MOUSE CONTROL AND ONE OPTIONAL ADDITION
'
'CHANGE 1. DELETE THE KEYBOARD INPUT CODE AND REPLACE WITH:
'************************** START INPUT CODE ****************************
DIM a(1 TO 17): RESTORE MouseData: FOR x = 1 TO 17: READ a(x): NEXT x
ax = 0: GOSUB Mouse  'Reset Mouse Driver
PRINT "LEFTCLICK Letter OR Label OR BlankLabel RIGHTCLICK=CLOSE PROGRAM"

DO
  LOCATE source, 7: COLOR 15, 7: PRINT "<S>"; : COLOR 0, 7
  ax = 1: GOSUB Mouse  'Show Mouse Cursor
  GOSUB PressClick: LOCATE source, 7: PRINT "   ";
  IF click = 1 AND y <= 12 THEN
    IF x <= 6 THEN
      IF y MOD 5 = 0 THEN press$ = CHR$(0) + CHR$(15) ELSE press$ = CHR$(9)
    ELSEIF x >= 10 AND y MOD 5 <> 0 THEN
      DO: temp = SCREEN(y, x): IF temp = 32 THEN EXIT DO
      press$ = CHR$(temp): source = y: x = x + 1: LOOP UNTIL x > 60
    END IF
  END IF
  IF click = 2 THEN press$ = CHR$(27)
  ax = 2: GOSUB Mouse  'Hide Mouse Cursor
'************************** END INPUT CODE ******************************

'CHANGE 2. EDIT THE LINE:

LOOP UNTIL press$ = CHR$(27): COLOR 7, 0: CLS : END
'to become:
LOOP UNTIL press$ = CHR$(27): COLOR 7, 0: ax = 0: GOSUB Mouse: CLS : END

'CHANGE 3. ADD SUBROUTINES AND MOUSE DATA TO THE END OF THE PART 1
PROGRAM:
'************************** END OF PART 1 *******************************
Mouse:
  a(2) = ax
  DEF SEG = VARSEG(a(1))
    CALL absolute(VARPTR(a(1)))
  DEF SEG
RETURN

PressClick:
  press$ = "": ax = 3
  DO: GOSUB Mouse: click = a(15): press$ = UCASE$(INKEY$)
  LOOP UNTIL click > 0 OR press$ <> ""
  x = a(16) / 8 + 1: y = a(17) / 8 + 1
  IF click > 0 THEN
    s! = TIMER
    DO: t! = TIMER - s!: IF t! < 0 THEN t! = t! + 86400
    LOOP UNTIL t! > .33
  END IF
RETURN

MouseData:
DATA -18288,0,13261,-23762,26,-30418,7198
DATA 11776,3721,30,-30418,8214,-13568,0,0,0,0
'************************** END OF PART 2 *******************************
```

Listing 4

In Part 1, a keyboard-driven QBASIC program was used to solve "Figure It Out" puzzles. Now, mouse input is added to the program using the method described in *PC Update*, December 1997. Make the three changes that are in Listing 4 or download MOUSEIT.BAS from the BBS. Run the program and test the mouse inputs.

LEFTCLICK Letter:
You don't have to click exactly on a letter. For example, in Equation 1 you can click on anywhere in +1B. Test this by clicking the sign, the number or the letter in equation. Note that the <S> marker moves to the selected equation **and** the letter is also selected. One click replaces two key presses!

Although it's not included in the prompts, try clicking the = sign or the total in any equation. This moves <S> without selecting a letter; this is the same as pressing a function key.

LEFTCLICK Label:
A "label" is the first six characters at the beginning of an equation, i.e. " Eqn" or the selected letter and the number. Clicking near the left side of the screen in any row except row 5 or row 10 is the same as pressing Tab.

LEFTCLICK BlankLabel:
Clicking near the left side of the screen in the blank part of row 5 or row 10 is the same as pressing Shift+Tab.

RIGHTCLICK = CLOSE PROGRAM:
This is the same as pressing Esc.

Run the program again and use the mouse to follow the instructions in Part 1, Listing 3. Point and click is much faster and easier to use than pressing keys.

Note: Listings 1, 2 and 3 were printed in Part 1 of this article, published in *PC Update*, July 1999. The two programs FIGUREIT.BAS and MOUSEIT.BAS are available on the PBS.

```
'OPTIONAL ADDITION TO THE END OF THE SUBROUTINE FixSourceEqn:
  IF temp = 0 AND total(source) = 0 THEN
    coeff(source, ASC(press$)) = 1: LOCATE source, 20: PRINT "<<Press 0-9"
    total(source) = VAL(INPUT$(1)): eqn = source: GOSUB PrintOneEqn
  END IF
```

Listing 4 (continued)

There is only one set of values that satisfies all the equations from the DATA in Listing 3. However, eight equations with eight unknowns don't necessarily have a unique solution. An example of this is the DATA in Listing 5, which is taken from Ken Holmes' program quoted in Part 1. Other recent examples are *The Age* puzzles of 30 Jan, 20 Feb, 13 Mar, 17 Apr, 24 Apr, 22 May and 5 Jun this year. These puzzles can be solved with the help of the rules that acceptable values are the ten digits 0-9 and no values are duplicated.

Listing 5 gives two solutions because sequences solutions.

The three lines of instructions in each example correspond to Stages 1, 2 and 3, described in Part 1. In Stage 2 of both examples, two identical equations appear and the subroutine "DelLetter" completely eliminates one of them, leaving **eight** unknowns but only **seven** equations! Don't give up.

In Stage 3 of Example 1, select equations with only **one letter** and also select equations with J **and one other letter** but be careful not to select J; select the other letter. The only acceptable values in equation 7 are J = 9 and K = 0. **One** equation solved for **two** unknowns! Substitute J = 9 into the other equations to solve the puzzle.

In Stage 3 of Example 2, select equations with only **one letter** and also select equations with C **and one other letter** but be careful not to select C; select the other letter.

Solving these equations is not as easy as it was in Example 1. Equations 1 and 2 assign A = 7 and H = 8. Therefore values 7 and 8 cannot be used in Equation 11 so its only acceptable solutions are C = 5 and J = 9, or C = 9 and J = 5. But in Equation 6, if C = 9 then K = -8 which is unacceptable so the only acceptable values are C = 5, J = 9 and K = 0. Substitute C = 5 into the other equations.

The solutions to the equations can be displayed on screen by installing the **optional addition** from Listing 4. You still have to use mental arithmetic to find the acceptable value for the lost letter but you can recreate the lost equation and display the results with the final instructions in each example.

It will be interesting to see if a puzzle is ever set that can have more than one set of acceptable results.

Post Script

The puzzle in *The Age* of 12 June 1999 contained an error and the result was A = +6, B = +15, C = +24, D = -24, E = -41, F = +3, G = -2, H = -21, J = +43, K = +19, missing letter = +69. A correction on 19 June gave a result of A = +6, B = +2, C = -2, D = +2, E = +11, F = +3, G = +11, H = +5, J = +4, K = +6, Missing letter from row 3 = +4, and from column 3 = +17. To obtain the solution given in *The Age* of 19 June the column totals should be 20, 34, 22, 16, 22. ❑

```
***** DATA WITHOUT A UNIQUE SOLUTION ******
DATA  a,  7,  h,  8
DATA  d,  e,  g,  j,  k,  18
DATA  g,  b,  h,  c,  h,  30
DATA  f,  d,   ,  e,  j,  21
DATA  a,  k,  d,  a,  e,  17
DATA  c,  e,  f,  b,  c,  19
DATA 23,  8, 24, 26, 24

*************** Example 1 *****************
 Select Eqn1 A  Eqn2 H  Then select..
 Eqn4 B  Eqn6 D  Eqn3 G  Eqn11 E  Eqn9 C
 Eqn8 F  Eqn7 K Then CLICKLabel or TAB &..
 Eqn3 G  Eqn7 K  Eqn8 F  Eqn9 C  Eqn11 E
*****************************************
  A  1      +1A =  +7
  H  2      +1H =  +8
  G  3      +1G  +1J = +15
 Eqn 4      -1B  +2J = +15
            +1D  +1E  +1F  +1J  +1? = +21
 Eqn 6      +1D =  +1
  K  7      -2J  +1K = -18
  F  8      -1F  +2J = +14
  C  9      -1C  -1J = -14
            +1D  +1F  +1G  +1H  +1? = +24
  E 11<E>   +1E  +2J = +20
 Eqn12    =  +0
*****************************************
 From Eqn7:  J=9   K=0   (See text)
 Thus   G=6   B=3   F=4   C=5   E=2
 Or install the optional code and:
 Select  Eqn12   TAB   Press J   Press 9

*************** Example 2 *****************
 Select Eqn1 A  Eqn2 H  Then select..
 Eqn4 G  Eqn6 K  Eqn9 E  Eqn11 J  Eqn12 D
 Eqn3 B  Eqn7 F Then CLICKLabel or TAB &..
 Eqn12 D  Eqn3 B  Eqn4 G  Eqn7 F  Eqn9 E
*****************************************
  A  1      +1A =  +7
  H  2      +1H =  +8
  B  3      -1B  -2C = -13
  G  4      +1C  -1G =  -1
            +1D  +1E  +1F  +1J  +1? = +21
 Eqn 6      -2C  -1K = -10
  F  7      +2C  +1F = +14
 Eqn 8    =  +0
  E  9<S>   +2C  -1E =  +8
            +1D  +1F  +1G  +1H  +1? = +24
 Eqn11      +1C  +1J = +14
  D 12      +1D =  +1
*****************************************
 From Eqns 1, 2, 11 & 6:  C=5  (See text)
 Thus  B=3   G=6   K=0   F=4   E=2  J=9
 Or install the optional code and:
 Select  Eqn 8   TAB   Press C   Press 5
*****************************************
```

Listing 5

TUTORIAL

Don Singleto
Tulsa Computer Societ

Registry backup

Here is the SAVEREG.BAT file I use to do a registry backup on my old luggable:

```
d:
cd \win95
attrib -s -r -h system.dat
attrib -s -r -h user.dat
copy system.dat c:\savereg
copy user.dat c:\savereg
attrib +s +r +h system.dat
attrib +s +r +h user.dat
c:
cd \savereg
copy c:\autoexec.bat *.dat
copy c:\config.sys *.dat
dir
```

To see how it works, let us consider a few commands at a time.

```
d:
cd \win95
```

The above two commands select the drive and directory containing Windows 95. They may be different on your computer. Your Win 95 may be on drive C: instead of drive D:, if so change the first command. And it may be installed in a directory called "windows" instead of "win95", in which case change the second command.

```
attrib -s -r -h system.dat
attrib -s -r -h user.dat
```

These two commands remove the system, read-only, and hidden attributes of two files, system.dat and user.dat; these two files constitute the "registry". Once these attributes have been removed, the files can be copied.

```
copy system.dat c:\savereg
copy user.dat c:\savereg
```

These two commands copy the system.dat and user.dat to a special directory I had already created on drive C, i.e. "c:\savereg".

```
attrib +s +r +h system.dat
attrib +s +r +h user.dat
```

Once the registry files have been copied, these two commands restore the system, read-only, and hidden attributes to the two registry files.

```
c:
cd \savereg
```

The registry itself is now backed up, but before the BAT file ends I want to preserve a copy of config.sys and autoexec.bat. The above two commands change to the drive and directory where I copied the two registry files.

```
copy c:\autoexec.bat *.dat
```

This copies the autoexec.bat file from the root directory, but instead of it being called autoexec.bat, in the savereg directory the file will be called autoexec.dat.

```
copy c:\config.sys *.dat
```

This copies the config.sys file from the root directory, but instead of it being called config.sys, in the savereg directory the file will be called config.dat.

```
dir
```

This command does a directory list of all files in the savereg directory. Notice that there are now four files with the extension dat. I then notice the largest numeric extension of other files, add one to it, and do a rename to rename all four "dat" files to that number. For example, assuming the largest number is 6, I would manually execute the command

```
ren *.dat *.7
```

Here is the GETREG.BAT file that I use on my old luggable to restore a particular set of registry files:

```
if %1x == x goto :error
d:
cd \win95
attrib -s -r -h system.dat
attrib -s -r -h user.dat
copy c:\savereg\system.%1 *.dat
copy c:\savereg\user.%1 *.dat
attrib +s +r +h system.dat
attrib +s +r +h user.dat
goto :end
:error
echo Need to know which one
dir system
:end
```

To understand this BAT file, let us again look at it one or two lines at a time.

```
if %1x == x goto :error
```

When one invokes GETREG one needs to indicate which set of files (set 6, set 7, set 8, etc.) are to be restored. One restores set 6, for example with the command

```
GETREG 6
```

This parameter is seen by the BAT file as "%1" (the first parameter to the BAT file). If the first paramater followed by the character "x" is the same as the character "x", then the first parameter must be NULL (i.e. it must have been left out), and therefore the BAT file will transfer control to the line ":error". If this transfer does not take place, and if the following instructions are executed then "%1" is presumed to represent the set to be restored.

```
d:
cd \win95
```

These two commands switch to the Drive and Directory where Windows 95 is installed on the luggable. You would need to change these to the drive and directory it is installed on your computer.

```
attrib -s -r -h system.dat
attrib -s -r -h user.dat
```

These two commands remove the system, read-only, and hidden attributes on the current registry, so that they can be overwritten by the following two commands

```
copy c:\savereg\system.%1 *.dat
copy c:\savereg\user.%1 *.dat
```

These two commands take the specific set of system and user files in the C:\savereg directory that correspond to "%1" and copy them to the current drive and directory (where Windows 95 is), and they restore the "dat" extention to the files.

```
attrib +s +r +h system.dat
attrib +s +r +h user.dat
```

Now that the restored registry files are in place, these two commands restore their system, read-only, and hidden attributes so that they will be protected from accidental modification.

```
goto :end
```

The batch file has now achieved its objective, so this command transfers control around the ":error" code and takes it to the end of the file. Notice I did not restore the autoexec.bat and config.sys files. Currently I have not been a need to do that, but if I did, the SAVEREG file did capture the files that were active at the time those registry files were backed up, and I could restore them if I wished. I could also add commands to SAVEREG to backup other files like WIN.INI or SYSTEM.INI or MSDOS.SYS if I felt the need, and if I did that, I might elect to have restored them as well before transferring control to ":end".

```
:error
echo Need to know which one
dir system
```

These instructions get control only if the first statement in the BAT file found that the first parameter had been eliminated, in which case it would echo the statement "Need to know which one" reminding the user to indicate the particular set of registry files to be restored, and then it would do a directory list of all of the "system" files, so that he would see by the extensions, which backup sets were available to be restored.

```
:end
```

This command ends the BAT file. If ":error" got control it would be encountered after the directory list had been done. If the BAT file did restore a set of registry files, the "goto :end" would have transferred control to the ":end" command.

Some may say all of this is nice for Windows 95 users, but I still use Windows 3.1. What should I do? That is a reasonable question. Look at the copy of the PRESERVE.BAT file that I use in my Windows 3.1 system. Note that this set of files uses a directory I created on my C: drive called "autoconf", because it contains backup sets of autoexec.bat and config.sys files, among others.

```
if %1x == x goto :noparm
```

As in GETREG above, this BAT file checks to see if a file name (up to eight characters) was provided when PRESERVE was executed, such as "PRESERVE OFFICE" which I might use right after installing the Microsoft Office files, and if I did, it would create a backup set in a file called OFFICE.ZIP. If I left off the paramater, I would not abort, but would rather just update the files in "initial.zip".

```
pkzip c:\autoconf\%1.zip
c:\autoexec.bat c:\config.sys
e:\windows\*.ini
e:\windows\*.grp
```

This command uses PKZip to create a ZIP file with a particular file name in the c:\autoconf directory. This file will contain a copy of the current autoexec.bat file, the current config.sys file, all of the ini files in e:\windows (which is where I have windows 3.1 installed), plus all of the "grp" files (which contain the icons for each program in each program group).

```
goto :end
```

Once the ZIP file has been created this file is finished, so it transfers control to the end of the BAT file.

```
:noparm
pkzip c:\autoconf\initial.zip
c:\autoexec.bat c:\config.sys
e:\windows\*.ini
e:\windows\*.grp
```

If no parameter was specified in the PRESERVE command, this code would get control, and PKZip would be used to update the autoexec.bat, config.sys, and all ini and grp files in initial.zip, replacing files if they were already there, and adding them if they were not.

```
:end
```

The ":end" file represents the end of the bat file, to which the "goto :end" command can transfer control.

This article was originally printed in the January 1998 issue of the Tulsa Computer Society's *I/O Port Newsletter.*

❑

```
if %1x == x goto :noparm
pkzip c:\autoconf\%1.zip c:\autoexec.bat c:\config.sys e:\windows\*.ini e:\windows\*.grp
goto :end
:noparm
pkzip c:\autoconf\initial.zip c:\autoexec.bat c:\config.sys e:\windows\*.ini e:\windows\*.grp
:end
```

Listing 1 PRESERVE.BAT

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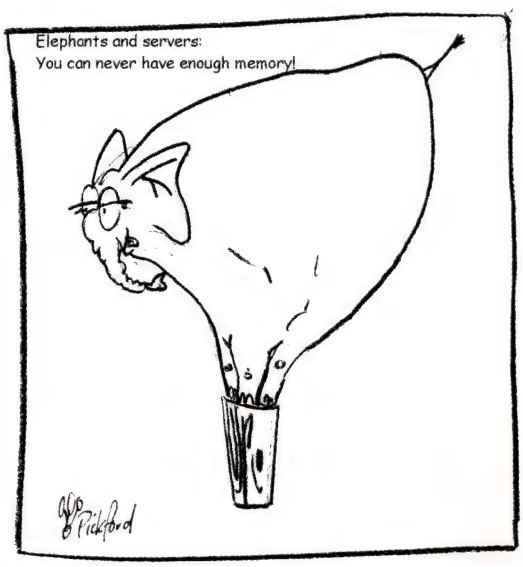

Deshani Rodrigo and Peter Stanski

From privacy to privacy

Our privacy is being continually invaded by phone surveys, detailed information gathering for competitions, other marketing campaigns, and numerous other means. These minor daily annoyances make their way into our lives and we are gradually becoming immune to them. However, combine them all into a single large infrastructure, and we may once again have to re-evaluate our views.

We will try to give you a glimpse of how your seemingly meaningless data trails can be used powerfully to track your daily lives. This is not to make you paranoid but to make you aware of its existence and the possibilities of its uses.

For instance, several years ago many debates took place over the proposed introduction of the Australia card. It's intent was to help identify individuals, and was said to function much like a general-purpose identification (ID). Beacause of potential privacy abuse of the ID system, the proposal was scrapped. The debate over a personal ID may have long expired, but much more interesting proceedings are taking place. These are driven by commercial firms that are silently gaining more details about individuals and their daily activities. Fueled by electronic commerce, credit card usage, frequent flyer programs, and the power of global information networks, our personal information may now be available to just about anyone.

How much is too much?

Unsuspectingly, very few of us are aware of the personal details we submit to the bank, airline agencies, telcos and even the corner store supermarket. Furthermore, competition entry forms that we submit and the Web sites that we visit all leave a trail of our individual activities. Electronic Web submissions, e-mail sent and received, along with URLs visited, may all be collected into a database. These singularly meaningless data portions are often insignificant. The danger of privacy abuse is considered relatively minor in many of these cases. Birthdays, names and addresses may not be very secretive to most of us, but combined with information from other sources can be quite harmful. Once they are combined into an information repository such as a database, much can be learned about a given person or organisation.

Consider a fictional character such as Joe Smith who enters a fictional competition at the annual Fishing Show. He punches his personal details into the computer such as name, date of birth, phone number, marital status, favourite TV shows, and income level in hope of winning the draw. Given the chance to enter the draw for free, and with the possibility of winning, he submits his details. Joe may not think too much about his actions, but focuses upon the potential end goal of winning the competition.

Now to the company that collected the information. Not only can they sell his details (unless specifically stated otherwise) but they can build an amazingly accurate personal profile. Without the need for a controversial Australia ID Card, Joe has left much the same information plus other details with a private organisation. In this case, the company may use his details without much consideration. Had it been a government body, at least some of the data would be treated as confidential. This has left Joe and his personal details in the hands of someone who he does not know and may not even trust.

Eventually someone wins the prize but unfortunately Joe is not that lucky. The real winners in this competition were the people behind the competition. They managed to elicit as much information as possible from the entries, and will most likely be selling it to other companies who will use the information to improve their target marketing programs. Sadly for Joe, he may find himself bombarded with unwanted advertising material from companies and organisations that he has little or no interest in.

However, according to the information providers examining his personal data, some indications may have presented Joe as a likely interested consumer. Sometimes this may be the mere fact that Joe filled out the entry form, and it is quite obvious that this assumption may not always hold. However, you can't really blame the competition organisers, as they usually do not do anything illegally. They would have obtained permission to run the competition and even asked all entrants to indicate whether or not they wanted to receive any further promotional information.

In most cases we either decided this was OK, since we were in a hurry, or missed reading the fine print. At other times it may also be a condition of entry that the entrant agrees to receive further promotional material from the organiser, or any other organisation that the competition organiser deems appropriate.

Also, what of the occasional disclaimer that the information is not going to be sold to other firms? Even here we could find ourselves becoming famous amongst the competition-organising group who are represented as a single entity combining their efforts into providing the competition prize pool. Technically they can all share in your private data, and therefore, your personal details have not been sold. This sort of approach to information sharing is even more predominant in larger companies that can share personal details across organisational departments. In doing so, they may streamline sales pitches and special offers, which may prove potentially appealing to the end users—Joe and people like us.

Online privacy: electronic commerce

Invasion of user privacy is an issue of increasing importance where Web browsing is concerned. In particular, this is becoming a major problem in electronic commerce sites. Many users have little idea about the amounts of information that may be gathered about them and their browsing habits

by various Web sites. User profiles may be gathered from users, either knowingly or unknowingly.

For effective user profiling, as much information as possible needs to be gathered. The two types of user profile acquisitions are direct and indirect. The way in which profiles may be gathered indirectly is by forming a profile based on selections that users make while visiting the site, that is, through the monitoring of user behaviour using cookies and server-side log files. Unlike direct acquisition, users do not willingly provide the information about themselves.

The degree of complexity, completeness, as well as depth of user profiles may vary significantly. Some profiles may include psychological factors elicited during registration, spending habits from past interactions, and even income levels derived, or provided by the user.

Currently there is growing pressure by Web users to have more privacy laws in place, giving them more protection when Web browsing. The momentum of these campaigns, such as the US-based Privacy First Campaign will only continue to increase as more users are made aware of the current vulnerability of Web browsers. Consequently, it is likely that some sort of regulations will be imposed by local governments, but the problems associated with international privacy rulings will continue as is currently the case with related issues such as Internet censorship.

A positive side

However, there is little doubt that Web-based marketing will be more specific and sophisticated. When user profiles are used in conjunction within the context of user activities, new marketing and commercial opportunities emerge. These will provide users with personalised service, tailored to their specific individual needs, and also cut down on the large amounts of unwanted advertising.

For e-businesses, such profiling techniques will undoubtedly be welcome, due to the phenomenal power they hold. Businesses will be able to carry out the functions of marketing and selling in an integrated manner, previously undreamt of. In addition, the current extravagant advertising budgets may be slashed, helping greatly to reduce the costs of doing business. From the users' perspectives, these focused methods of Web-based advertising will be appreciated as they are less likely to be bombarded with unwanted and irrelevant advertising.

In the near future, data mining, which is the process of examining several databases to discover knowledge about something (us in this case), is likely to become more popular.

Corporations may sell access to their databases and become more like a credit rating authority specialising in your shopping, recreational and other activities. Consequently, they will have the power to learn of your shopping habits through credit card shopping and fly-by cards, and discover your travel patterns through you frequent flyer programs. They may locate your friends and business partners by examining your phone call logs, and ultimately track your immediate whereabouts on a world-wide scale (mobile (GSM/CDMA) and satellite (Iridium) communication). If that was not sufficient, your ISP logins, browsing habits, e-mails, FTP and telnet sessions may all be audited and tracked.

Therefore, the phone and ISP bills that we take for granted are still somewhere in the system, readily available to those who are willing to pay for them. These services and their providers have not fully realised the synergy of information and profile integration. The "co-opetition" between competing companies is where the future of sales, e-commerce and marketing is heading.

Combined with the power of the Internet, and electronic transactions, the future of user profiling and personalised services tailored to each individual will flourish. The two-way user-to-service-provider relationship which many have taken for granted, is revving up for a revolution never seen before outside government circles such as those of CIA, FBI and ASIO. Users will naturally be wary of businesses being able to obtain so much information about them, which creates a sense of vulnerability. Hence, users may at first be extremely cautious of these Web sites and organisations once their systems are fully deployed (this is happening now). Therefore, the key challenge that lies in the hands of businesses is to establish a sense of trust from users and ensure that this trust is maintained.

In order for e-commerce to continue to proceed along the current successful path, these ideas and concepts must be sold to users. They must feel comfortable with this technology and have the knowledge and awareness to minimise any fears. The other important factor is to show users that they will not be abused by giving personal and potentially sensitive information to non-government organisations.

Summary

Having presented the picture of information trading, user profile management and e-commerce, it is also worth knowing that those who do keep your private information do adhere to some ethics, codes and procedures. The information kept in their databases alone may not hold complete user profiles and remain segmented until such a time as data mining is employed. Data mining is not widely used for all applications, but appears to be the next step for technologically empowering corporations.

Therefore, as e-commerce continues to evolve, it is likely that this area needs to be regulated. This will provide an infrastructure to help protect users from being abused by businesses thrilled with the idea of being able to peep into individual lives on a global scale. Presently only governments have the access to data mine rich sets of user information ranging from payroll systems, bank accounts, travel habits and domestic census information.

With the currently evolving technologies for e-commerce, it is most likely that governments will no longer be the only organisations to build an individual's profile from their shopping and living habits. It is still difficult to establish the extent of the impact brought about by user profiling, but the ability to attain such information will definitely create user fear. Only later will it settle down and become an acceptable norm for e-commerce on the Internet, Internet2 and the Next Generation Internet (NGI) networks.

About the authors

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Major Keary

For the bookshelf

Morgan Kaufmann, a long standing publisher of professional computer books, is now distributed in Australia by Harcourt Brace; some of the current titles are reviewed here.

Data compression

Data compression is generally regarded as an arcane subject; as long as the right compression tool is readily available most users don't want to know about the details. However, if you happen to need technical information at a professional and academic level, then two titles should be on your reading list.

Khalid Sayood teaches a course on data compression. His students needed to buy several textbooks to cover all the necessary information, so he decided to write one that would satisfy the needs of students undertaking an introductory course, and as a text for short courses for professionals in the information industry.

Introduction to Data Compression covers lossless and lossy compression coding systems. There is a thorough description of the work of Claude Shannon, Markov, and Huffman, and of more recent developments such as arithmetic coding and dictionary systems.

Lossy audio and image compression has become of great importance to modern information systems. The author includes a lot of mathematics in the detailed descriptions of each system, and includes tutorials for those who need a refresher course. Chapters cover scalar quantisation, vector quantisation, differential encoding, subband encoding (including wavelets), transform encoding, analysis/synthesis schemes (includes fractal compression), video compressions, and probability and random processes.

Each chapter has exercises and a reading list, there is a separate and extensive bibliography, and an index.

Designed for an academic audience, the book is also an important resource for anyone researching or developing compression systems.

Khalid Sayood:
Introduction to Data Compression
ISBN 1 55860 346 8
Published by Morgan Kaufmann
475 pages
RRP $125.00

Wavelets

Not to be confused with the .WAV file format, wavelets "are a mathematical tool for hierarchically decomposing functions—have also recently been applied to many problems in computer graphics—image editing and compression, automatic level-of-detail control for editing and rendering curves and surfaces, surface reconstruction from contours, and fast methods for solving simulation problems in 3D modelling, global illumination, and animation". Wavelet image files have a .WI extension, occupy far less space than GIF or JPEG, and provide much clearer images.

Just as Markov chains—presently so important in data compression systems—came from mathematical research carried out some one hundred years ago, wavelets derive from the 1873 observations of Karl Weierstrass in which he described what we now call fractals. The name, *wavelet*, dates from 1940 when it was coined by a seismologist. Fascinating stuff, and you will find more about it in *Wavelets for Computer Graphics*.

Wavelet theory has many applications; this book concentrates on computer graphics, which encompasses many forms apart from pictures. For example, visual representation of time-series data, medical applications (such as a cross section contour through a human organ), images, and surfaces.

If you want to see what wavelets can do, visit www.summus.com; it is the site of Summus Ltd., a vendor at the leading edge of wavelet image technology. There are links to other sites, including press reports, and a beta version of their software, a Netscape plug-in that can be downloaded.

If you have an academic or professional interest in computer graphics, either in the area of image compression, image editing, or image querying, this book is an essential resource. It is divided into parts. Part 1, *Images*, contains chapters on: *HAAR*: The simplest Wavelet Basis; Image Compression; Image Editing; and Image Querying. Part 2 deals with curves and covers the theory of multi-resolution analysis. Part 3 is about surfaces; it deals with surface wavelets and surface applications. Part 4, *Physical Simulation*, is about modelling, global illumination, and variational modelling. Part 5 contains appendices: an overview of linear algebra, B-spline wavelet matrices, and Matlab code for B-spline wavelets.

Highly technical, lots of maths, but very well written. Not a dabbler's guide to wavelets unless you have a background in linear algebra. For those who want to understand how wavelets work and how they can be applied to computer graphics, this is probably the best single text.

Sollnitz, Derose, & Salesin:
Wavelets for Computer Graphics
ISBN 1 55860 375 1
Published by Morgan Kaufmann
245 pages
RRP $105.00

Practical Computer Network Analysis and Design

Wrong decisions in network design can prove very costly. Here is a text that presents, in a practical way, a guide to network design principles. The author of *Practical Computer Network Analysis and Design* addresses the issue of "the system-wide effects of each decision".

The book first discusses analysis at conceptual, guideline, and practical levels. It then deals with design, covering technology choices, interconnection mechanisms, network management and security, physical design, and addressing and routing.

Conceptual case studies are used to good effect, and each chapter is followed by exercises (solutions available from a Web site) that should be useful for both self-teaching and formal courses.

At a practical level, managers and network engineers are provided with useful worksheets, the templates for which can be downloaded from the supporting Web site.

A valuable resource for anyone involved in enterprise network analysis, design, and installation. The book is particularly well written and does not require readers to have a degree in computer science. The support Web site contains further useful information.

An essential acquisition for public, educational, or corporate libraries with holdings on networking at a technical level.

James McCabe:
Practical Network Analysis & Design
ISBN 1 55860 498 7
Published by Morgan Kaufmann
467 pages
RRP $110.00

Frame Relay Applications

Frame relay is a high-speed packet switching protocol; originally used in wide area networks (WANs), it has been applied to connecting LANs separated by long distance. It is capable of high-speed (1.544 Mbps) data and image transfer, and—even though it was not designed for the purpose—new developments are extending the technology to encompass voice and video. *Frame Relay Applications* is sub-titled, *Business and Technology Case Studies.* The book is designed for managers rather than technicians; as the author points out, most of the literature has been of a technical nature and "virtually unusable to the business community", or is marketing oriented and of no use "to technical people actually trying to deploy frame relay technology". The author set out to "merge both the business and technical aspects", and he has done a very good job.

Good use is made of conceptual and real case studies that highlight both business and technical aspects. Anyone who has responsibility for making business decisions relating to networks should find this a valuable resource; engineers and technicians responsible for installing or upgrading networks should find the parallel discussion of technical and business aspects helpful. There is a chapter on small business application.

The book brings together a remarkable body of information that is unlikely to be found in any other single text. Chapters follow a format that discusses, in logical sequence, issues affecting business administrators and technical personnel. Some of those issues are especially pertinent to one or the other, but the author presents the information in such a way as to help both see the complete picture. It is very well done and should answer questions arising from any situation in which frame relay may replace or supplement an existing installation. Distributed networking, LAN internetworking, LAN-to-LAN, IBM environment, X.25, IP, and the possibilities of voice over frame relay are all discussed. Well worth a place in libraries where there is a demand for networking information.

James Cavanagh:
Frame Relay Applications—Business & Technology Case Studies
ISBN 1 55860 399 9
Published by Morgan Kaufmann
376 pages
RRP $139.00

Compiler design

Most of us take for granted those mysterious programs that take an ASCII file with lots of curly brackets and truncated words— like *char*, and *VarName*—and transmogrify them into an executable file that does all sorts of wondrous things. Of course, compilers have to be written by someone, usually a software engineer. And software engineers need resources.

Advanced Compiler Design & Implementation is "intended for computer professionals, graduate students, and advanced undergraduates who need to understand the issues involved in designing and constructing advanced compilers for uniprocessors". It assumes knowledge of "data structures, algorithms, compiler design and implementation, computer architecture, and assembly-language programming". Chapters deal with: introduction to advanced topics; ICAN (informal compiler algorithm notation); symbol-table structure; intermediate representations; run-time support; producing code generators automatically; control-flow analysis; data-flow analysis; dependence analysis and dependence graphs; alias analysis; optimisation; redundancy elimination; loop optimisation; procedure optimisation; register allocation; code scheduling; control-flow and low-level optimisations; interprocedural analysis; memory hierarchy; and case studies of compilers and future trends.

Appendices include a guide to assembly languages used in the book (SPARC, POWER and PowerPC, Alpha, Intel 386 family, and PA-RISC); representation of sets, sequences, trees, DAGs, and functions; and software resources available by ftp or from the Web. There is a comprehensive bibliography and two indexes (one is for math formulas, ICAN functions, and major ICAN data structures). In common with other Morgan Kaufmann professional titles, it is supported by a Web site that contains solutions to exercises included in the book, information about resources, and additional material.

An obvious resource for course material in computer science studies, and a book that should be considered by anyone involved in compiler design.

Steven Muchnick:
Advanced Compiler Design & Implementation
ISBN 1 55860 320 4
Published by Morgan Kaufmann
856 pages
RRP $205.00

Unified modelling language

Unified Modelling (usually rendered, *modeling*, in American English) Language (UML) is a new notation method for developing object-oriented (OO) applications. The first literature appeared in 1996 and 1997, but it was not until 1998 that UML notation was standardised. There is quite a flow of UML books developing, and one of the first (if not the first) is *Understanding UML— The Developer's Guide*, an excellent introduction to both OO methodology and the UML scheme of notation.

Why notation, why UML? Analysis is an essential part of software development, but too much analysis can result in an over-detailed design that simply defies implementation. On the other hand, lack of sufficient analysis can lead to projects that cannot be completed. The development cycle involves a requirements analysis phase, a design phase, a coding phase, and a testing phase.

The authors set out to show how an OO modelling tool can be applied to the development of an application. They take a real problem, analyse it, and then design a Java application,

Why not join Melb PC?

Melb PC is many things to many people, after all it is the second largest user group in the world! Although each of our thousands of members has a unique experience of Melb PC, we have a common belief in the value of computer users helping other computer users.

Helping them do what?

The list is almost endless — some of the things Melb PC is best known for are:

- **Supporting**
  Practical and emotional support. Whether you're trying to install a new operating system, hard drive, word processor or flight simulator, someone at Melb PC has been there and done that. You may find a whole group of people who meet regularly to discuss the very problem you are experiencing.
- **Meeting**
  One of the ways Melb PC helps its members support each other is through meetings. Within its diverse membership you'll find novices, old hands and everyone in between. Whatever you're trying to do, there's someone to help you. As a member of Melb PC, you'll also have the opportunity to meet industry leaders and technical experts representing major software and hardware vendors. They'll answer your questions and demonstrate the latest developments in computing technology, often before the general public gets the news.
- **Teaching, learning and enjoying**
  As an organisation, Melb PC with its range of skills and knowledge provides a range of formal and informal opportunities for teaching and learning new computing skills.

So whatever you use a computer for, Melb PC helps you enjoy it more!

How?

Melb PC's greatest strength is its membership. With more than 11,500 members, it is the world's second largest PC User Group. It was founded in 1984, and is still run by and for its members, people like you.

Although Melb PC employs some staff, most functions from writing and editing the group's magazine, to maintaining the group's online services, organising monthly meetings, etc, are performed by volunteers.

Who belongs to Melb PC?

Anyone who uses a computer at work, school or play. Parents, children, grandparents and singles. Beginners, old hands, youngsters, oldsters and inbetweensters. Teachers, students, business operators, secretaries, CEOs, doctors, lawyers, plumbers, electricians, builders, pilots, writers, editors, engineers, journalists, accountants and more! You name it, Melb PC's members do it. Your membership is your key to a vast store of knowledge, an invaluable information resource and help in many fields.

Your benefits of membership come to you in many ways throughout the year:

- *PC Update*
  Eleven times a year, Melb PC's magazine, *PC Update* brings you news about computer hardware, software and how your fellow members use these to achieve their goals. You'll read about members' experiences, learning from their successes and mistakes. Each issue also covers the group's regular activities and any special "members only" events or offers the group has arranged. Your yearly membership, which includes *PC Update* delivered to you, costs about as much as it would to buy a year's issues over the counter.
- **Computer First-Aid and Dial Help**
  Free vendor support is scarcer every year. It's no wonder many members find these two services, alone, worth the cost of membership. These are "members only" services. Experienced volunteers share their time and knowledge to help fellow members work through problems. Just knowing there is someone to call gives some members the courage to try something new.
- **Internet Access**
  The Internet is the foundation of the communication revolution and the key to success in the new millennium. Melb PC pioneered the provision of affordable Internet access and remains an acknowledged leader offering very competitively priced Internet access to members. The fast and reliable service provides connection speeds up to 56 kbps, with pre-configured software for ease of installation, helpful technical support, and is constantly evolving in pace with emerging technology.
- **Training**
  Whether you're an absolute beginner planning to buy your first computer or a power user looking to update your skills, Melb PC has a training course for you. Most courses are hands on, conducted in Melb PC's own, modern, Pentium-equipped training centre. These courses are "members only" so they are cost-competitive compared to similar courses elsewhere. Each month *PC Update* contains details of forthcoming courses.
- **Meetings**
  Our main monthly meetings include presentations by leading computer hardware and software vendors to Melb PC members and their guests. Speakers have included industry giants such as Bill Gates, Philippe Kahn and Gordon Eubanks, as well as the CEOs and senior managers from major Australian and overseas vendors. Members win software worth thousands of dollars at these meetings. The meeting provides an opportunity to ask questions and get to know your fellow members better. With hundreds of members attending the meetings are great for exploring your fellow members' problem-solving skills.
- **SIGs**
  If big groups aren't for you, or if you have a special interest, Special Interest Groups (SIGs) may be your thing. A SIG can deal with any topic, from a particular application to hardware, programming, or how to get the best from your equipment. Check current issue of *PC Update* for meeting dates, locations, contact information and information about future events.
- **Bulletin Board**
  For a different style of electronic communications our group operates a free multi-line Bulletin Board System (BBS) on 9699 6611. (You can dial in with your modem using Windows HyperTerminal, supplied with Windows.) There are numerous Freeware and Shareware files available to download. Members can use the BBS to send messages around the world (in message forums similar to Internet Newsgroups), or to other members. Real-time online chatting with other members is also available.
- **Reference and Software Libraries**
  Members can browse or borrow books and magazines. An extensive range of shareware and freeware programs are reviewed in *PC Update* and are available on disk from the shareware library.

Whether you are an individual, family or company, one thing is clear. If you want to get the most from your computing experience, a Melb PC membership is a must.

Melb PC Membership Application/Renewal

Personal details

Membership number (if renewing)

Title Mr Mrs Miss Ms Dr Oth. Ref: PCU 0899

First name Middle initial

Last name

Postal address

Postcode

Country

Business phone ( )

Home phone ( )

Job title

Employer

I do do not want to receive occasional promotional mail from commercial organisations.

I hereby apply for membership of Melbourne PC User Group Inc. A00003293V and agree to abide by its rules while I am a member.

Signature

Date

Membership details

Type	New	Renewal	Amount
Individual	$60	$50	$
(extra family members at $10 each)	$10	$10	$
Corporate	$130	$120	$
(two representatives, extra representatives at $60 each)	$60	$60	$
Student or **Pensioner** (see notes)	$50	$40	$

Notes:

- Students must attach a photocopy of student card or letter from educational institution confirming full-time student status.
- Pensioners must attach a photocopy of both sides of their Pension Concession Card.
- Please attach a list if more than one family or corporate member is being nominated with this application.
- Corporate members may change representatives by giving notice in writing to the secretary.

Total $

How did you learn about Melb PC? Please complete the appropriate details.

PC Update Swap Meet Friend (please give name and number following)

Member No: Name:

Other (give details)

For membership application or renewal, or training orders, please use the remittance and/or credit card form on the next page.

Training order form

Course Title	Starting Date	Amount
	...../...../.....	.
	...../...../.....	.
	...../...../.....	.
	Total:	.

Top choice shareware

These are some of the most popular volumes in the Melb PC Shareware/ Freeware library. Refer to the regular catalogue updates in *PC Update* for up-to-date listings of other disks—use the lower part of this order form for your choice from those listings.

Shareware/PD Title	Melb No.	Qty	Amount
Shareware Catalogue & New Member Disk	0000		
Graphics Workshop for DOS	8015		
Graphics Workshop for Windows 3.x	8064		
Graphics Workshop for Windows 95	8562		
Growit	8157		
List	1490		
McAfee VirusScan for DOS	8018		
McAfee VirusScan for Windows 3.x (3-disk set)	8897–8899		
McAfee VirusScan for Windows 95 (4-disk set)	8893–8896		
MS-DOS 6.22 Stepup from 6.0 (3-disk set)	8110–8112		
PKZip/PKUnzip	1235		
Real Audio Player for Windows 3.x	8364		
Real Audio Player for Windows 95	8592		
Telix for DOS	8062		
Telix for Windows v1.00 (2-disk set)	8129–8130		
Wolfenstein Fights Street Fighter II	8012		
Melb PC Internet kit (special price) Windows 3.x @$10 per set (3-disk set)	8711–8713		
Melb PC Internet Setup Master (Win 95/98)	9192		
Postage/Packing is included. Costs: first disk (per order) $5, second disk $4, third and subsequent disks $3 each		**Total:**	

I am ❑ under 15 years of age ❑ under 18 years of age ❑ over 18 years of age Signature:

Buy your diskettes from Melb PC

Order details

Brand/Size	Cost (Box of 10)	Number of boxes	Value
Generic preformatted 3.5-inch HD (1.44 MB)	$5.00		
Postage and packing		$5 per order:	**$5.00**
Enclose a cheque or use the credit card authority below		**Total: $**	

Important: Please complete the following for both shareware and diskette orders.

Member details

Name

Membership number:

Delivery details

Delivery Address

State Postcode

Payment Details/Credit Card Authority
Forward to Melb PC, PO Box 283, South Melbourne VIC 3205, Australia

I enclose a cheque made payable to Melbourne PC User Group Inc. (A0003293V) for $ Date

Please debit my: Bankcard Visa MasterCard with $ Card expiry date

Card number

Business hours phone number ( )

Card holder's name Signature

Internet access application form

nstructions

Please **read** the entire form. It may be photocopied.

Complete **every** field else it might be returned to you. Each field has a purpose, which includes updating our database.

Enclose a cheque or authorise a charge against your credit card for the requisite amount. Send the form with payment to

Melbourne PC User Group
PO Box 283
South Melbourne VIC 3205

)escription of service

General. The Melbourne PC User Group Inc A0003293V (Melb PC) Internet Service network (the Network) is a private telecommunications network owned and operated by Melb PC for its members. It is administered by the Internet Subcommittee (the Subcommittee) as a subscriber-funded service.

Function of the Melb PC Network. The primary function of the Network is to support the free transfer of information to and from Melb PC members, subject to the terms of our Acceptable Use Policy.

Standard Service. SLIP/PPP accounts.

Features:

- Electronic Mail.
- We also provide access to other services that are found on the Internet but they are not under our control.

Charges. Annual fee $140, subject to change from time to time.

Limits and Quotas. Up to 120 minutes access per day (non-cumulative). A bank of modems is made available with a time limit of 30 minutes for the benefit of users who need to check their mail and get off quickly. The Mail quota is 4 MB. Excess mail may be deleted.

Access Software. You will need to acquire and configure suitable software from our Shareware library or other resources.

Accounts. Accounts are issued only to individuals, not company names. Melb PC may reject an application without stating a reason.

Support. Volunteers offer their help in local newsgroups, via our free Bulletin Board Service, or by telephone.

Training. Melb PC offers training courses.

Duration. The subscription to the Network is for one year from the date of acceptance. It automatically terminates upon expiry of membership of Melb PC.

Acknowledgment. Successful applicants will include individuals whose forms are correctly filled out and whose funds have been transferred to our bank account.

Net Etiquette. Melb PC endorses adherence to ("net etiquette" or "netiquette") as deemed by the subcommittee from time to time.

Internet access agreement

Definitions

"Melb PC" means The Melbourne PC User Group Incorporated A0003293V or its assignee;
"the subscriber" means the Melb PC member making this application;
"family subscriber" refers to an existing Melb PC Family Member, or a member of the family residing at the same address who applies for Melb PC Family Membership at this same time, paying the additional $10 Melb PC membership in addition to the Internet subscription;
"Internet access" means access to the World Wide Web, Internet e-mail and any additional Internet facilities Melb PC may offer to its members from time to time, but unless Melb PC agrees otherwise does not include supply or maintenance of the subscriber's equipment, software or telephone line, or technical support;
"subscription period" means the period in advance for which the subscriber has paid in full, being one of the periods of subscription offered by Melb PC from time to time;

1. The subscriber asks Melb PC to provide Internet access and Melb PC agrees to do so.
2. This agreement starts when an authorised officer of Melb PC has executed it and Melb PC has received cleared payment for the subscription period.
3. Subject to the early termination clauses of this agreement and to clause 4, this agreement continues until the end of the subscription period.
4. If Melb PC and the subscriber renew this agreement for a further subscription period, this agreement applies to the renewed subscription period unless the parties agree otherwise in writing.
5. The subscriber acknowledges that:
   a. Continuity and speed of the Internet access depends on a wide range of factors, many of which are beyond the control of Melb PC;
   b. Melb PC has no control over the accuracy or appropriateness of any information on the Internet;
   c. Melb PC is not responsible for any material available on the Internet;
   d. The subscriber's Internet access may be interrupted by equipment failure, the need for routine maintenance, peak demand and so on;
   e. Melb PC cannot guarantee that the subscriber will be able to secure access at any given time, or that fluctuations in demand by other subscribers will not prevent the subscriber from using the full amount of the maximum daily time allowance on any given day.
6. Subject to matters of the kind referred to in the previous clause and to the subscriber's access limits, Melb PC will use its best endeavours to keep Internet access available continuously and to allow the subscriber to have access for the current daily time allowance from time to time.
7. The subscriber indemnifies Melb PC against any liability, claim, action, suit, demand, loss, cost or expense arising out of or in any way connected with this agreement or Internet access, including any negligence by Melb PC, its servants or agents.
8. The subscriber will pay fees according to Melb PC's standard pricing list from time to time, and a copy of the list certified by an officer of Melb PC is conclusive evidence of the prices applicable at any time.
9. Melb PC may make rules for the use by the subscriber of Internet access, including rules as to online time limits, transmission volume limits, excess usage fees, terms of payment and any other matter at all that Melb PC considers desirable, provided that there shall be no reduction in the access time of the subscriber during any period for which the subscriber has paid in advance unless the service provided by Melb PC has been or is to be enhanced so as to make up for any lost value. Melb PC may alter the rules on not less than fourteen days notice to the subscriber. A copy of the rules certified by an officer of Melb PC is conclusive evidence of the rules applicable at any time. The rules from time to time will apply as if they were set out in full as terms of this agreement.
10. The subscriber must not deliberately or recklessly do anything that damages Melb PC's equipment, software, setup or services.
11. The subscriber must not use Internet access to annoy, harass or harm other Internet users.
12. The subscriber must not use Internet access for any unlawful purpose or in any unlawful manner.
13. The subscriber will keep safe and confidential any access numbers, codes or passwords allotted to them by Melb PC and notify Melb PC without delay of any disclosure of those things.
14. Melb PC may terminate the subscriber's Internet access immediately if the subscriber breaches this agreement or the rules, or fails to promptly pay any money owed to Melb PC, or ceases to be a member of Melb PC.
15. Subject to the previous clause, either party may terminate this agreement by 14 days' notice to the other save that Melb PC must not terminate this agreement while the subscriber has credit for advance payment of fees without refunding a pro rata part of those fees or making alternative Internet access arrangements for the subscriber, and termination by the subscriber does not affect any debt owed to Melb PC at the time of termination.
16. Melb PC may delete without notice any material found on its storage disks that is unauthorised, unlawful, obscene, dangerous, excessive in volume, uncollected for an excessive period, or in an unauthorised place.

17. Melb PC may delete without notice any material found on its storage disks without giving any reason for doing so.
18. Melb PC may make and keep any record it requires for the purpose of this agreement or the rules or for the operation of its services.
19. The Description of Service, Internet Access Agreement, and the services as described on this application form constiture the entire agreement between the parties, and neither of them relies on any term, condition, warranty, collateral contract, representation or promise not set out in those parts of this application forms.
20. Any notice given about any matter concerning this agreement may be given by fax, e-mail or post at the last fax number, e-mail or postal address notified to the sender and is deemed to have been received at the time when it would have arrived in the ordinary course of the relevant type of transmission.
21. The subscriber must not transfer, sell or share Internet access rights, or allow the account to be used by any other person, other than those Melb PC Family Members who are listed on this application.
22. The user's last name must be displayed in all mail and news messages. The user's first name or initials may be displayed as desired.
23. Commercial traffic, in the form of private messages and advertisements in newsgroups designated for that purpose, is permitted within the bounds of net etiquette.
24. The *Organization:* field in private electronic mail or public newsgroup article headers must always be *Melbourne PC User Group, Australia*, the name of the service provider. Any other organisation or business name is permitted only in the four-line (maximum) "signature" text that is optionally inserted at the end of the message or article.
25. Connection of any networking system or device that permits multiple users to share one account simultaneously is not permitted.
26. The *From:* field used in mail and news messages must be the Melb PC assigned user name, e.g. *jjones@melbpc.org.au* not the address where a reply is sought, e.g. *jjones@pobox.com.au*. Such an arrangement should be managed by use of the *Reply-To* field.
27. Melb PC may assign its rights and obligations under this agreement to an Internet access provider that is of equal standard to Melb PC, and after notice of assignment is given to the subscriber, this agreement shall have operation as if it had been entered into between the assignee and the subscriber and Melb PC's rights (except for its right to recover any money owed to it immediately before the assignment) and obligations under this agreement shall be at an end.
28. The parties submit to the law of Victoria, Australia in relation to any the interpretation of this agreement, or any dispute arising out of it. ☐

Service required and payment

Subscription $ 140.00
Melb PC Internet Kit software
Windows 3.x version @ $10.00 $ .....
Melb PC Win 95/98/NT setup
@ $5.00 $_____
Total $_____

Tick ☑
☐ Cheque for above total is enclosed.
or
☐ Debit my card with $.....
☐ Bankcard / ☐ MasterCard / ☐ Visa

Expires: ...../.....
Number:

– – – – – – – – – – – – – – – –

Name on Card: .....

Signature: .....

Applicant details

First Name: .....

Last Name: .....

Membership Number: .....

Postal Address: .....

.....

Postcode: .....

Telephone
(day): (.....) .....

Telephone
(evening): (.....) .....

Job Title: .....

Employer: .....

Tick ☑
My age is: ☐ 18 or above. ☐ Below 18.
I hereby apply for the Internet service described on this and the previous page

Signature: .....

Additional Family Members who will share the one account/user name:

Name .....

Signature .....

Name .....

Signature .....

Name .....

Signature .....

Applicant(s) to complete (CAPITALS, please)

Parent/guardian to complete

(If any of the applicants is below the age of 18)
I am the parent/guardian of the applicant. I am aware of the nature of information available through the Internet and support this application.

Name: .....
Telephone
(day) (.....) .....

Signature: .....

User name

List below the user ("login") names you would like, in order of preference, up to eight lowercase characters and/or numerals. Write very clearly, to avoid our confusing certain letters. User names are expressed in lowercase letters and numbers and must represent your real name in some recognisable way, e.g. "John J. Jones" might request user names such as "john", "johnj", "jjones", etc.
Any user name that is already allocated or deemed unsuitable in the opinion of the system administrators will not be allocated.
Preferred full name (e.g. *John J Jones* or *Jones Family*), to be recorded on the system.

.....
Previous name (if to be changed):

Choice 1:							
Choice 2:							
Choice 3:							
Choice 4:							
Choice 5:							

Office use only

☑ Tick as applicable:

☐ Form and fee correct

☐ Parent of underage applicant contacted (date) ...../...../199...

☐ Membership database checked and updated

☐ Incomplete form returned to sender (date) ...../...../199...

☐ Acknowledgment returned to sender (date) ...../...../199...

Initials of office staff: .....

MELB PC USER GROUP MEMBERS' DISCOUNTS

If you are a member or advertiser offering a discount on goods or services to Melb PC members, on production of their membership cards, please contact the office to register

Computer service, parts, support, etc

ustral Data rocessing Services
rest Hill
h: 9894 0199
ax: 9894 7688
0%—(not hardware) on onsultancy, data backup/ torage, maintenance.

ylott Computing
sternwick
h/Fax: 9596 6454
lob: 0413 393 486
mail: daylott@bigfoot.com

atterymaster
lurrumbeena
h: 9563 8460
ax: 9579 4844
5%—batteries for laptop mputers.

ayside PC Services
lentone
h: 9585 1645
0%—selected services.

ables 4 PCs
ulleen (near Balwyn)
h: 9852 1779
ax: 9852 1868
0%—off all new IBM & acintosh cables, adaptors, ata switch boxes & networking quipment.

alculator King
t Kilda Road
h: 9866 8753
ax: 9820 9652
0% — all calculators (inc. cientific/financial and pecialty). Personal Organisers: harp, Casio, HP, Psion.

ompatible Toner and Ink
orth Carlton
h: 9388 9744
ax: 9388 9755
5%—Re-manufactured laser rinter cartridges and inkjets.

reensborough Computers
reensborough
h: 9434 6166
ax: 9434 6033
0%—(labour only) on repairs nd upgrades for individual Melb C Members. 5% on some odels of new PC Systems lease enquire).

letropolis Corp. Pty Ltd
erntree Gully
h: 9752 4242
ax: 9752 3777
0%—computer systems (incl. ree 24-hour software/ technical upport.) $35 per hour for aintenance/support

Modem SuperStore
Box Hill
Ph: 9899 4744
Fax: 9897 3939
5%—Melb PC Member discount.

Moon-Ess Computers
Essendon
Ph: 9326 2776
Fax: 9326 2797
10%—service and repairs, new & secondhand parts & systems.

Mountain Visions Pty Ltd
Sunshne North
Ph/Fax: 9310 1063
10% — on labour only — customised software, hardware & software consulting, maintenance, on-site training.

Nucleus Computer Services Pty Ltd
Carnegie
Ph: 9569 1388
Fax: 9569 1540
10% — on all services on equipment.

PCLC Computers
Heathmont
Ph/Fax: 9870 3288
20%—labour on upgrades, 5% on some new systems.

Pollock Computer & Technical Services
Hampton
Ph: 9533 5002
Fax: 9598 3186
20% — Personal PC tuition & problem solution.

Sender Computer Training
Caulfield
Ph:9523 1588
20% — One-to-one computer training.

The Power of 2, Software and Marketing
Pakenham
Ph: 5940 2020 BH & AH
10%—registered copies of Brothers Keeper genealogy software. Local support, manuals & supply of updates. $75 plus postage.

Scanner Place
Box Hill
Ph: 9897 3777
Fax: 9897 3244
www.ausmedia.com.au
10%—Software (often more)
5%—Hardware
$10—Ink refill kits.

Stone Computer Installations
Ph: 9315 0095
Mob: 0412 099 538
25%—Hardware/software installation, internet set up and problem solutions.

Summit Computers
Lilydale
Ph: 9739 6269
Fax: 9735 0503
20%—on labour (service, networks, etc),
6%—hardware & software.

Books, magazines, software, etc

Advanced Computer Products
St. Albans
Ph: 9364 1886
Fax: 9367 3639
20%—all computer books & software.

Capricorn Programming Services
Frankston
Ph: 9775 5377
Fax: 9774 5434
10%—on Scanlab Vol.1 Antivirus & virus education kit.

Collins Booksellers
(Technical and Academic Centre)
Melbourne
Ph: 9654 3144
10%—computer books.

Computer Book Company
Mt Evelyn
Ph: 9737 0411
Fax: 9737 0433
20%—all computer books, mail order

Computer Associates Pty Ltd
Glen Iris
Ph: 9825 5600
Fax: 9884 0844
E-mail: info@vet.com.au
10%—Vet Anti-Virus Software.

Dymocks, Shop 2
Melbourne
Ph: 9663 1344
Fax: 9663 1581
10%—computer books, not on magazines.

Dymocks
Brighton
Ph: 9592 1911
Fax: 9592 1611
10%—computer books.

Dymocks
Westfield Shopping Town, Doncaster
Ph: 9848 7209
Fax: 9848 7307
10%—computer books.

Dymocks
Frankston
Ph: 9770 0300
Fax: 9770 0400
10%—computer books.

Dymocks
Fountain Gate
Ph: 9796 6459
Fax: 9796 6509
10%—computer books.

Dymocks
Pran Central, Prahran
Ph: 9510 2100
Fax: 9519 2520
10%—computer books.

Trevor Gibbs
Melton
Ph: 9743 8917
15%—books: "Windows Whys" and "Easy DOS It", $16.95 ea, $32 for both. Incl diskettes.

ITS Information Technology Systems
Greenvale
Ph/Fax: 9333 2197
20%—computer books, Educational Software.

McGills Authorised Newsagency
Melbourne
Ph: 9602 5566
10%—computer books.

Polyester Books
Fitzroy
Ph: 9419 5223
Fax: 9419 5451
10%—on all fiction, science, computer & non-fiction titles, magazines, comics & T-shirts.

RMIT Bookshop
Melbourne
Ph: 9663 5855
Fax: 9663 7528
10%—all books.

Technical Book and Magazine Company
Melbourne
Ph: 9663 3951
10%—computer books.

The Worsley Press
Hastings
Freecall: 1800 622 805
Ph/Fax: 5979 1112
E-mail: info@worsleypress.com
10%—& free postage.

Other services

Adept Accounting and Taxation
Mill Park
Ph: 9436 7604
10%—on all taxation return preparation & business accounting services.

Blinds of Best Value
Oakleigh South
Ph: 9562 7788
Fax: 9562 7757
15% — top quality vertical, holland, venetian, timber venetian blinds and shutters, and all types of awnings.

Gripstep Floor safety treatment
Glen Waverley
Ph:9574 8244
10% — on anti-slip floor treatment for tiles, vinyl, timber, cement etc.

Heal Your Life Astrology
Marysville
Ph: 5963 3626
Fax: 5963 3737
10% — on all birthchart consultations

Jowett and Moulton Chiropractors
Melborne (city)
Ph: 9629 1016
15% — discount on treatments provided by the chirpractor. Massage and acupuncture also available.

Mediware Applications
Camberwell
Ph: 9889 9234
Fax: 9889 9236
5%—(purchase), 10% on training and installation of Dental, Medical (including MedClaims) & Allied Professional Patient Management & billing software.

Mike McKeon Music
Dingley Village
Ph: 9551 7363
5%—on our Octet or 10% on a 14 pce. Big Band and two vocalists. Discount off Musicians' Award rates. For dinner dances, weddings, balls & special events.

Min Thong Lee
c/- AP Insurance Brokers
Queen St, Melbourne
Ph: 9602 1869
Fax: 9602 1876
5%—life insurance, loans, home & contents, motor, commercial.

Newtech R&D
Kilsyth
Ph/fax: 9723 7535
10%—on electronics consumer product design & Japanese translation.

Quarter Deck B&B
San Remo
Ph: 5678 5485
Fax: 5678 5545
E-mail: rosco@melbpc.org.au
20% — on B&B stays of two nights or more. Great views and close to many tourist attractions.

Sit Right Chairs Pty Ltd
Coburg
Ph: 9354 2612
Fax: 9354 2795
10% — off range of office and ergonomic chairs.

Sleepwear Factory Shop
South Yarra
Ph: 9826 2999
Fax: 9826 8207
10% — on half-price ladies' and girls' nighties, pyjamas, dressing gowns. Also maternity nighties (summer/winter).

James Small, Solicitor
North Balwyn
Ph: 9830 0233
Fax: 9830 0222
20% — on standard conveyancing and will preparation fees (exc. govt. charges and disbursements).

Stewart Smith
Australian Commercial Credit Licenced Insurance Brokers
Ph: 9816 3264
Fax: 9816 3270
25% — off normal costs. Leasing Equipment & cars. Home/ commercial mortgage loans.

Tortoise Head Guest House
French Island
Ph: 5980 1234
Fax: 5980 1222
10%—on accommodation, fully catered, adjacent bay.

Ultimate Business Service Opportunities
Strathmore
Ph: 9483 4417
Fax: 9374 2919
25%—on travel cards that allow 50% off world-wide hotels. 12 month g'tee.

Yodgee's of Prahran Leather and Travel Goods
Prahran
Ph: 9510 2413
Fax: 9510 2916
10%—computer briefcases and travel bags, R.M.Williams boots and clothing, Dr Martens footwear. ❑

Special interest group meetings

Home pages

Many SIGs have their own home page. You can find links to these via *www.melbpc.org.au/sig/index.htm*

Access (Database)

access-sig@melbpc.org.au
2nd Monday
6.30 – 8.30 pm
Ray Watson
9576 8520 BH & AH

Assembly & Other Languages

alt-sig@melbpc.org.au
1st Thursday
7.00 – 10.30 pm
Melb PC SIG Room
Felix Hofmann
9523 5400 AH
Don McKenzie
9521 3060 BH

Ballarat

ball-sig@melbpc.org.au
1st Thursday
7.30 – 9.45 pm
(except school holidays)
Ballarat & Clarendon College
614 Mair St, Ballarat
VicRoads map 254 L12
Ken Smith
5332 7851 BH & AH

Bendigo

bend-sig@melbpc.org.au
2nd Wednesday
7.30 – 10.00 pm
Girton Grammar School
105 Mackenzie St, Bendigo
(Vine Street entrance, then follow the signs)
VicRoads map 282 K14
Russ Collins
5439 3708 BH & AH
Joe Henry

Clarion

clar-sig@melbpc.org.au
4th Wednesday
7.00 – 10.00 pm
Melb PC SIG Room
Chris Livingstone
9431 1897 BH & AH

Communications

comm-sig@melbpc.org.au
2nd Wednesday
7.00 – 9.30 pm
Melb PC SIG Room
Philip Lew
9822 2998 BH (brief calls)

Daytime

day-sig@melbpc.org.au
2nd Thursday
10.00 am – 12 noon
Melb PC SIG Room
Don Buchanan
9509 7119 BH & AH
Graeme Minto
9440 5030 BH & AH

Digital Photo

3rd Monday, 7.00 pm
Melb PC SIG Room
Thom Lyons
0417 525 171

East

east-sig@melbpc.org.au
2nd Tuesday
7.30 – 10.00 pm
Multinet Theatrette
200 Rooks Rd, Vermont
Melway map 62 H2
Keith Beresford
9733 5044 AH
9736 2515 BH
Margaret Brown
9874 5778

East Workshop

east-ws@melbpc.org.au
Sunday following the East SIG meeting,
10.30 am – 2.30 pm
Multinet Theatrette
200 Rooks Rd, Vermont
Melway map 62 H2
Jim McNabb
9754 4862
Ken Gubbins
9898 5478 PH/FAX

Graphics

graph-sig@melbpc.org.au
3rd Monday
7.30 – 10.30 pm
Melb PC SIG Room
Yahya Abdal-Aziz
9562 1023 AH (brief calls)

Hardware

hardware-sig@melbpc.org.au
3rd Wednesday
7.00 – 11.00 pm
Melb PC SIG Room
Felix Hofmann
9523 5400 AH
Thom Lyons
0417 525 171

LUBe

lube-sig@melbpc.org.au
3rd Thursday
7.00 – 10.00 pm
Melb PC SIG Room
Thom Lyons
0417 525 171

MACE

(Melbourne Atari Computer Enthusiasts)

mace-sig@melbpc.org.au
2nd Sunday
10.00 am – 2.00 pm
Melb PC SIG Room
Graham Hurford
9416 1126 AH
Roger Davies

Music

music-sig@melbpc.org.au
2nd Thursday
7.30 – 9.30 pm
Melb PC SIG Room
Yahya Abdal-Aziz
9562 1023 AH (brief calls)
Eric Best
9376 1984 AH

New Users, East

newe-sig@melbpc.org.au
2nd Tuesday
7.30 – 10.00 pm
(except January)
St Mark's Anglican Church,
Cnr Canterbury & Burke Rds, Camberwell
Melway map 45 J10
Doug Brooke
9822 3458 BH & AH

NT

2nd Tuesday, 7.00 pm
Melb PC SIG Room
Andrew Callaway
9619 4067 BH

OS/2

os2-sig@melbpc.org.au
4th Tuesday
6.30 – 10.00 pm
Melb PC SIG Room
John Angelico
9544 8792 BH & AH

Programming

prog-sig@melbpc.org.au
2nd Tuesday,
7.30 – 10.00 pm
Melb PC SIG Room
Ross Hall
5428 6470 AH
9699 4000 BH
Andrew Callaway
9619 4067 BH

Quicken

quicken-sig@melbpc.org.au
4th Thursday
7.00 – 9.30 pm
Melb PC SIG Room
Viv Martin
9583 5372 BH & AH

Retired & Interested Persons

rip-sig@melbpc.org.au
10.00 am – 12 noon
4th (*not* last) Friday
Lutheran Church,
25 Cypress Ave,
Glen Waverley
Melway map 62 A9
Ken Thomas
9884 5309 AH
Noel Peters

Video Editing (General)

video-sig@melbpc.org.au
4th Monday
7.00 – 9.30 pm
45 Talbot Ave, Balwyn
Melway map 46 E8
Albert Vanzet
9439 1768 BH & AH

Video Editing (Non-linear)

videonl-sig@melbpc.org.au
1st Tuesday
(including Cup day)
7.30 – 10.00 pm
Melb PC SIG room
Lawrie Weston
9742 3738

Warragul

warr-sig@melbpc.org.au
1st Friday
7.30 – 10.00 pm
Warragul Education Centre
Smith St, Warragul
VicRoads map 337 Q8
Lindsay Perston
5623 1756 AH

Web Development

webdev-sig@melbpc.org.au
4th Monday,
7.00 – 10.30 pm
Melb PC SIG Room
Thom Lyons
0417 525 171

Web Development workshop

webdev-sig@melbpc.org.au
2nd Saturday, 10.30 am
Melb PC SIG Room
Thom Lyons
0417 525 171 (members may bring their own systems)

Western Suburbs

west-sig@melbpc.org.au
4th Tuesday
7.00 – 9.00 pm
Sunshine Squash Centre,
cnr Kent and Stewart Sts,
Sunshine
Melway map 41 B2
Robert Mead
9312 5427 AH

Windows

win-sig@melbpc.org.au
1st Monday
7.00 – 9.30 pm
Melb PC SIG Room
Lynn Pollock
9598 3186 AH
9533 5002 BH

Updates and corrections

Please send to

Dave Botherway
SIG Co-ordinator:

daveb@melbpc.org.au

or via the office.

SIG Co-ordinator
Dave Botherway

SIG meeting reports

Ballarat

» *Ken Smith*

Our meeting on 1 July was held at Ken Smith's house because the Ballarat & Clarendon College was unavailable due to School Holidays.

With a good number of attendees, our discussions were as lively as ever.

For those new members in the Ballarat area, or for those old members who don't come along any more, we have changed our meeting format from a structured Guest speaker/presenter type meeting, to a round-table open forum, discussing current events, new items and problem solving.

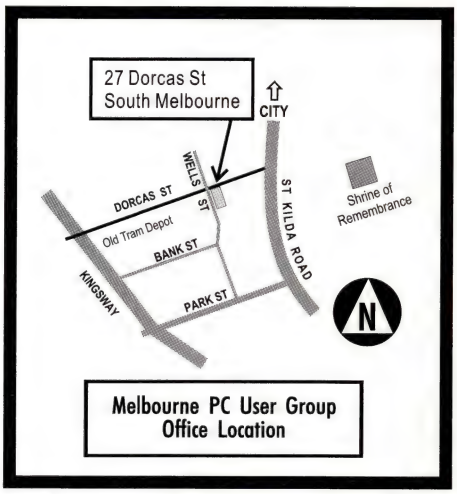
This appears to be more beneficial to a wider range of users and doesn't stream the evening too much.

One of the items discussed was the new interest by users in various versions of Linux. Some users are fed up with Windows bloat, many are regularly formatting their hard drive and re-installing software because trialled programs do not always clean the registry, or leave remnants of themselves behind, scattered around in the system somewhere, interfering with the clean operation of the machine when they are removed or deleted.

It is pretty obvious that the move to Linux is slightly premature, as it lacks the sophisticated look and ease-of-use that Windows users have become accustomed to, however it's come a long way from the total command line interface that it was. We think more users should have a look at some of the versions. Caldera OpenLinux 2.2, Red Hat Linux 6.0 and SuSE 6.1 would be good starting points. All are available on the Internet, and they are generally free.

Another item that members showed a lot of interest in was PDF format files. The great beauty of the files is they can be viewed across all platforms. So if you want to send your Family Tree file to relatives overseas, displayed exactly as it is to you by your favourite program, without them having to have the same genealogy program as you, or for that matter a PC running a different operating system, even an Apple Mac, then PDF is for you.

Adobe Acrobat readers are free, to read/view the files. Adobe also make Distiller to create them and Exchange to edit them. PDF is not an Adobe proprietary format but stands for "Portable Document Format". There are some freeware programs: try *www.cs.wisc.edu/~ghost/*



‡ Many SIGs meet at Melb PC's premises, at 27 Dorcas Steet, South Melbourne.

It has a nifty viewer but the PDF creator needs to be done at the command line which may be a bit tricky for some. Basically the programs convert or "distill" a bitmap image from a PostScript file.

There was some discussion on image-saving techniques, like when to save as a BMP, TIF or JPG. If you are going to

SIG and other meeting dates

August

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Note: These (‡) meet at Melb PC						1
2 Windows ‡	3 Video Editing (Non-linear) ‡ Committee ‡	4 **Monthly meeting**	5 Assembly & Other Languages ‡ Ballarat	6 Warragul	7 Web Development Workshop ‡	8 MACE ‡
9 Access (Database) ‡	10 Programming ‡ East New Users, East	11 Communications ‡ Bendigo	12 Daytime ‡ Music ‡	13	14	15 East Workshop
16 Graphics ‡ Digital Photo ‡	17	18 Hardware ‡	19 LUBe ‡	20	21	22
23 Video Editing (General) Web Development ‡	24 OS/2 ‡ Western Suburbs	25 Clarion ‡	26 Quicken ‡	27 Retired & Interested Persons	28	29
30	31					

use an image again and again don't save it as JPG. Information will get lost from the image each time you open and close the file, but JPG is great if you just want to attach a picture of the kids to an e-mail, they look pretty good on screen but often don't print out as well as you might expect, however the file size is a lot smaller than most others. If you are going to look at the file a lot and perhaps edit it, than a TIF is probably your best bet.

Further discussions were abandoned to look at a computer running both Windows 95 and Linux. This session moved to tweaking of programs such as Eudora and reconfiguring the Widows desktop when space for all the icons was used up. This is achieved by right clicking on the desktop, going to properties, then appearance, then desktop, and selecting new values for both vertical and horizontal spacing of icons, apply this, after exiting you can then arrange icons by name by right clicking again in the desktop.

The meeting closed around 10 pm. The next meeting is scheduled for 5 August, back at Ballarat & Clarendon College.

Keep your eye on the Web site at *http://www.giant.net.au/pcusers* for further developments.

Daytime

» *Don Buchanan*

Doug Brooke was our presenter for the morning, with Graeme Minto in charge of a well attended meeting.

"Y2K is about 160 days from the issue date of this magazine."

Starting about 1985, the PC clock/calendar functions were integrated into one of the VLSI chips but for compatibility and standards considerations, the CMOS memory usage was retained.

The problem arises if the year in the date is stored as a two digit number with a default century (19) and this could occur in either software or hardware.

Any software which incorporates dates, particularly financial and spreadsheet software, and especially older programs should be checked and tested. A quick check is to determine if the year in the date is stored as YY or as YYYY, from the relevant manual, knowledge of the application, or trial and error. If stored as YY it is almost certain to present a problem but if stored as YYYY it should be OK. Generally older programs tend to have two-digit years but the most recent programs in the main should store the full four-digit year. It depends also whether the program takes the date from its internal program coding or from the computer clock that is using YYYY. Run a couple of test examples using dates both sides of the century and observe the results. If erroneous results are obtained it will be necessary to upgrade the program, or adopt a new program which does not have the problem, and which accepts your existing data.

This is a chore, but **all** such software which is used should be carefully checked out.

The hardware is easier to check.

- Set the time and date to say 11:55:00 pm on 31-12-99 (or 31-12-1999, it doesn't matter)
- Turn off the computer
- Wait about 10 minutes for the computer clock to go past midnight
- Reboot and check the date (if it shows e.g. Fri. 04-01-1980 you've got problems).

Here is a fix.

- Leave the current time and set the date to (say) 01-01-2000 (note the four digit year), (or any other 21st century year)
- Turn off the computer
- Wait relevant time, reboot and check the date—it should be 2000 or whatever 21st century year was set.

Before you forget, reset the date (and time if necessary) back to correct current values. Then you know that you will have a fix for the computer (not its software) when the actual date comes around. This is a simple one-time fix to change the default century in the computer real time clock.

July

Alan Hamilton, a member of our own SIG, will give us insights into handling the financial, business, and technical aspects of Microsoft Excel.

August

We look forward to seeing our very own Graeme Minto taking us through the many advantages of using Go!Zilla to control downloading and using needed internet items.

East

» *Margaret Brown*

The June meeting was a busy one for George Skarbek. As well as hosting the Q and A session he demonstrated Networking procedures as the main topic.

George outlined the benefits of using Defrag while answering the question—can running Defrag possibly damage a hard drive? The surprising answer was that damage can indeed result if the power fails, the computer is turned off or is rebooted during the procedure.

Horror stories abound about computers that have never been Defragged since purchase with a resultant huge performance loss.

George advised removing all unwanted files before a Defrag. Useful programs to assist are available (e.g. Temp Clean BBS) and many computers can be programmed to routinely Defrag.

Another tip—as Defrag gives the drive such a solid workout it is worth running the program just before the warranty expires!

Networking two or more computers offers many useful options. As well as access to files on other machines it enables sharing of printers or other peripherals and can be used as a remote back-up.

With Noel Peters assisting and providing video display, George outlined the steps required to connect two machines.

A summary of the presentation is being prepared and should be available on disk at future East meetings.

A reminder for members sharing a LAN setup—consideration of others is important. A screen saver can use from 80—90% of system resources leaving very little for other users. Either display a blank screen or turn the monitor off on an idle computer.

Tips and Tricks (Jim McNab)

Jim continued the housekeeping theme with valuable advice about drive clean-up. His most important message—check that a file is actually what you think it is before deleting.

Some obvious files to target include those with tmp, avi, and txt extensions, all simple to display and check.

If unsure, bring the machine to the Sunday workshop and work with a

more experienced member alongside.

certain, press the Shift key as well as Delete to bypass the Recycle Bin for total and instant removal.

Scanning (Gary Taylor)

Gary responded to the many requests from members for a no-nonsense tutorial to cover basic scanning procedures.

Most mid-range scanners offer similar options and settings. These were explained in detail with particular emphasis on the choice of appropriate dpi settings. Scanning speed and file size are very dependant on this setting. Choosing an unnecessarily high dpi to scan an image can take a very long time to produce a huge file with absolutely no advantage at all in output quality.

Gary showed examples of the same text document scanned at a wide range of dpi. Under identical levels of magnification the differences were obvious but is always the trade-off is a balance between image quality and file size.

Gary offered valuable setting guidelines for scanning the most commonly used applications e.g. 300 dpi for black and white images and 150 dpi for standard processed photographs. Newsprint and magazine photographs need more care with setting selection and remember that the Help files can assist with information about halftones and moiré patterns.

The capabilities of OCR technology were also demonstrated. Gary commenced with a yellowed, blotchy 20-year-old photocopy, Arial font. This was scanned, then cleaned and edited after OCR and resized as an impressive Black Chancery document, an extraordinary transformation!

Some scanning tips:

- Always lock a scanner before transporting to reduce the possibility of damage and remember to unlock before use
- Turn on the scanner before the computer.

Check out The Scanner Place Internet site for valuable hints and general scanner information including "101 Things To Do With a Scanner" *www.ausmedia.com.au*

Coming up

Another scanning session with a demonstration of image manipulation.

East Workshop

» *Gary Taylor*

We had another very busy workshop, attended by 32 members, of whom 15 also "looked in" and contributed to the infant Genealogy Group. The latter is an exploratory sub-group of the workshop, where the interest and requirements for a Genealogy SIG (yet to be officially formed), were discussed. The main problem is not Genealogy per se, but elementary "how to use a computer"!

The Workshop spent more time than usual on what seems to be an increasing nuisance to all owners: removing bits and pieces from supposedly erased software, scandisk and defragmenting the hard disks. The inevitable FSISK was executed, and CD-ROM and Sound troubles were part of an enjoyable winter's day.

OS/2

» *John Angelico*

Our June meeting began with good numbers, which grew as others arrived. Finally a total of 23 people were present including some new faces.

We began the meeting with another apology from me that the scheduled topic: Warp Server 5 for e-Business was not a full-scale presentation. Despite advance planning from the previous meeting, last minute timing problems are always a risk, and play havoc with the long lead times required for printing meeting notices in *PC Update*.

We prepared for a session on command line utilities, demonstrating the versatility of OS/2. Command line sessions can sometimesd be a very efficient way to get certain complex tasks done. However, the SIG machine was playing up a little and this took some time, so we ran our general news update segment first.

After a mid-session break, we demonstrated the efficiency of command line utilities for such tasks as copying complex directory trees, bulk deletions, reviewing space usage and searching for files.

Following a further break, we opened up discussion on the future of the SIG, taking as a cue the decline in attendance, and asking those present for ideas on:

- Promoting the SIG
- Attracting new members (especially corporate OS/2ers)
- The kinds of services we wish to offer.

The final result was that we would survey the members to assess the level of interest in the points raised.

We closed the meeting at 9 pm and adjourned to the usual eatery.

We still have the following topics planned for the next few months:

27 July	Warp 5 Server re-scheduled but still tentative (looks like it will take the whole time)
24 August	Multimedia + Graphics
28 September	Utilities: Chris Graham and Dennis Bareis
26 October	Java and Databases (re-scheduled)

Hope to see you there!

Quicken

» *Bob Mayston*

Another good attendance, with several most welcome visitors. Viv Martin brought us up to date with news that Reckon, the suppliers of both Quicken and Quickbooks, are about to float the company. Registered users may have opportunities for investment. The question and answer segment followed. Here are a few highlights:

- Problems with lack of resources with Quicken. Many possibilities here. Suggested to check and shut down any other running programs. Remove screen savers
- Problems with downloading share updates on line. Check the patch to V7 Quicken has been loaded
- There is no suitable character for the Euro. The UK pound sign is in the alt character set.

Viv then gave a short introduction to V6 of Quickbooks. The main new features are multiuser capability, 32-bit code and claimed improved reporting. In keeping with Intuit's track record of bug infested new releases, there is a problem in updating the invoice module from previous versions. When asked to update the invoice data preferences to the new version the response should be to ***decline***. If accepted you will need to uninstall and

reload the program. Also it seems you need to reconfigure your invoice layout from that in previous versions, not a very pleasant thought. We shall look further into this release in our later meetings. Meantime be warned of this problem.

Viv next gave a short demonstration of invoicing under the GST regime. The latest version of Quickbooks V6 has altered the invoice layout to show the GST calculation on each item rather than a one-line figure at the end. Examples were shown of recording and crediting GST calculations; shades of things to come. The discussion roved over how the tax will be collected and administered, but when the subject of how particular paid and unpaid services were to be taxed it was deemed time to call a break for coffee!

After the break we looked at the Quicken Home Inventory module. This provoked a lively discussion on how to record and classify the entries. The systematic recording of all your household assets and their value provides a reference data base in case of need. Values may be recorded for both cost and replacement. Not many members had used the program which is an integral part of Quicken. It certainly is worth another look if you haven't done so.

Don't forget if you have a problem either in Quicken or Quickbooks and can massage sensitive data then bring it along on disk to our meeting. We can do a hands on workshop and hopefully solve your problem. Our meetings are held at the SIG rooms at Dorcas St on the fourth Tuesday of each month except December, commencing at 7 pm.

Retired & Interested Persons

» *Bill Coone*

In my far off youth, I read a story about an old farming couple who came to be foster parents of a baby giant who grew and grew at an alarming rate, as baby giants are prone to do, and so imposed great stress upon the lives and living conditions of all in the house. We have at our club rooms experienced similar difficulties with the growth and popularity of a "New Users"sub-group.

It is a group of people who have some basic knowledge of their computers and wish to learn from the experiences of others and share their own discoveries. Just about covers the whole membership doesn't it? Regular readers of this column will be glad to hear that the

EXPERIENCES

Thon Lyon

Genealogy and the Genealogy SIG

When I was growing up, my family made every effort to keep the secret of my father's death and his life a deep, dark secret. When I emigrated to Australia in 1988 I found the wonderful genealogical library in Swanston St. After weeks of reading and searching I found that my father died in 1950 fighting for a united Ireland. I also found I had an Uncle Joseph who also was in the fight and who was hanged in Belfast prison in 1955, and that I had a cousin in the far north west of Victoria.

The biggest surprise of the lot was that the Lyons family of Cork once ruled the Irish Kingdom of Muenster, is of the Scottish Clan Farquarson and that I am a (very) distant cousin of the Queen Mother. This long research project would have been accomplished within days if I had done it today online as part of the Melb PC Genealogy SIG.

The computer is an ideal tool for recording and retrieving genealogy information. A genealogy software program is merely a fancy front end for handling a lineage-linked or event-linked database of individuals. Whether your software connects your ancestors by lineage (bloodline) or events (marriages and births) is transparent to you, the user. You are concerned only with entering and retrieving information.

Fortunately, finding and entering genealogy information is easy, and you don't need the biggest and meanest computer on the block to do it. Even a slow 486DX-33 with 16 MB RAM running Windows 95 is adequate for the job if it has a CD-ROM drive and a modem. It is getting increasingly difficult to find commercial software on floppies, thus the need for a 4x CD-ROM. Furthermore, there is a tremendous amount of genealogical raw data (census records, marriage records, stamp duty records, etc) available on CD-ROMs in Australia and overseas.

The modem is useful because most software companies offer product support, raw data, shared data from other users, and so on, all accessible via your modem.

Nearly all currently popular genealogy programs run under Windows 9x. There is one (Personal Ancestral File 3.0) DOS program, and two (Family Tree Maker and Reunion) that have Mac versions. Perhaps seven out of ten new computer genealogists will choose a program that uses the Windows or OS/2-Win session platforms.

Genealogy SIG

The nascent Genealogy SIG is a subgroup of East SIG and meets in parallel with the East Workshop on the Sunday after the second Tuesday in the Multinet Theatre, 200 Rooks Rd, Vermont.

So far they have had two meetings, and will meet again on 14 August. The SIG has yet to find a leader(s), so that it can be a standalone group.

rovision of our own PA system seems o have overcome the problems we had ompeting with the greetings and onversational buzz, from the people rriving for the main meeting in the ame hall. In fact this month I noticed ome of them paying close attention to hat was being said by the New User roup speakers.

Ken Thomas reported that Alan McKenzie is greatly improved and Roy Alexander is now at a rehab hospital. We send them and all members feeling elow par, our wishes for a good ecovery.

mentioned in an earlier report that Cindy Perry had taken over the rinting sub-group which also meets efore the main meeting and continues hriving, so much so that we hear that Cindy has since bought herself a newer, igger, steam driven, Epson photo printer which will print A3 sized masterpieces.

Cindy was our guest presenter at the June meeting, leading us through the task of creating and printing a personalised Address Book, using Access data-base and MS Word. It was an enthralling show, demonstrating a creative use of the features available in both programs and an easy familiarity and expertise in using them. Curly questions were not only answered but demonstrated on the spot. Thanks Cindy, you did good!

Next month's Tour de Force will be the "Swap Sale or Auction" of members' unwanted wardrobe fillers where unwilling spenders try to outwit the optimistic sellers and traders. There are usually quite a few bargains to be had at these fun-days so come along and try your luck.

Video Editing (General)

» *Albert Vanzet*

Computer owners are only all too familiar with the saying: "It is hard to keep up with the changes." Today's latest is tomorrow's history. Today's 10 GB hard disk price buys 15 GB next week. Yesterday's Pentium 200 is old hat when today's 450 is the norm.

It is even more evident for the owners of video cameras. What we consider today to be the latest and the smallest camera, is old hat tomorrow when we read that another manufacturer has come out with one that is half the size. This was evidenced at our June meeting when one of our members pulled a digital video camera from his jacket pocket. It was so small that one wonders how a videographer could manage his fingers around the buttons.

Choosing a genealogy program is imilar to selecting a spouse. You must e comfortable with the program. It ust be reliable and robust enough to et the assigned jobs completed atisfactorily. It must be able to get long with its peers. That means it ust be GEDCOM compliant.

The GEDCOM (Genealogical Data Communications) standard is the *lingua anca* of genealogy software. Similar to he dBASE standard with general data-ase programs, a modern genealogy rogram must be able to read and write nformation. All of the most popular Windows genealogy programs are EDCOM compliant. This is critical if ou wish to share information with our cousin Kyle who uses a different rogram than you do.

Ed: Note that a GEDCOM file created by ne program may not be fully used by nother, thus valuable data fields would e lost. I use Family Origins for Windows nd it enables me, for example, to create otes and source fields for every event ertaining to an individual, including ustom events. Another program would ot know where to put such information nd may ignore it completely.

ortunately, the basic information does et passed, so GEDCOM remains a valuable nterchange medium.—AN]

Genealogy software manufacturers have lso discovered multimedia. Video and udio files may now be associated with ndividuals. Photographs and documents nay be scanned. You can insert a picture of your grandmother and an image of her birth certificate, but remember that high-resolution colour scans occupy huge areas of disk space, 12–18 MB each.

Once your information is in place, most modern programs automate the process of producing a book-like history of your family or ready the information for export to a word processor including indexing. Remember that Genealogy data is only as reliable as its source. Citing sources is critical in producing credible family histories. Again, most of the programs allow for source citations, footnotes and end notes.

Unless you're like my lot, a stark recounting of your ancestors can make for some pretty dull reading and you might need to add anecdotes and family tales. These go into the notes section for each individual. With Windows software, the notes are not limited in size. Type to your heart's content.

Most of the fun of using genealogy software is in printing out large ancestor or descendancy charts. The ancestor chart starts with you and lists your parents, grandparents, etc. A descendancy chart begins with a prominent ancestor and lists his or her children, grandchildren, etc. All of the programs produce these two basic charts. Most produce numerous other special-purpose charts and lists.

One of the latest innovations is the ability to export data in HTML format, ready to be uploaded to a family Web page. Posting information you have is the most effective way of finding a cousin who is also researching your family. Don't forget to get the family name on a search engine!

A complete listing of current genealogy programs would fill this *PC Update*. Some of the most popular include:

- Family Tree Maker 4.0, easily the most prevalent and known for its ease of data entry and great charts
- Corel Family Tree 2.0, known for its graphics and glitzy printouts
- Family Origins 6.0, a good, stable program made popular by its low price and the reputation of its author
- The Master Genealogist 3.0, the industrial-strength program used by professional genealogists and serious amateurs who need great strength in the documentation areas
- Personal Ancestral File 3.0, produced by the Church of the Latter Day Saints (Mormons of Utah), popular with its members and the general public because of its low cost and because it does not require Windows —an old 386 PC will do nicely.

Shop around before selecting a genealogy program and be advised that most computer genealogists use more than one. Better yet, attend the Genealogy SIG and get a first-hand look at what's available in Melbourne or even in our Shareware library or on the BBS. ❑

Due to unforeseen circumstances our intended speaker, Don Hawkins, had to postpone his talk till next month.

Ian Cairncross of Video Accessories, East Bentleigh, who had stepped into the empty spot, continued on this subject of miniaturisation during his talk about tapes.

Ian told us about the short history of audio and video tapes and proved his points by showing us the massive tapes used in the early ABC days and the miniature DV (digital video) tapes used in the current digital video cameras. It was interesting to hear that the plastic used in these new tapes is only 6.5 microns thick. No wonder that a speck of dust at 30 microns or worse, a human hair at 60 microns can do a lot of damage to our recorded videos. Consider also the task these tapes have to endure of moving at high speed through our cameras, the sudden stops and starts and the general abuse these cameras and tapes get in the field

Ian advised us to use only top grade tapes and to have our video cameras and recorders regularly professionally cleaned.

After our segment "What's New" under the management of Robert Dorin, who gave us the URLs of several interesting Web pages including some about television test patterns, we showed a short video combining test patterns with images of a Dutch windmill. We ended our meeting with a show of members' videos.

It is always striking to observe the choice of subjects and the imagination used in our members' video productions. Although we had asked for videos about pets, four- or two-legged, we had a variety of subjects. The videos ranged from a historic black and white photo album style video to a small dog's fun with a balloon. Other videos included a peaceful creation showing our black swans, a surprising little aircraft named "Dragonfly" (the owner and builder's obvious pet) and a granddaughter at gymnastics. A special mention needs to be made of Robert Dorin's contribution with his comical video about his stony pet "Rocky". His subject, the narration and the story line were not only very humorous, Robert also proved that Studio 400 can, even when used without TimeCode, produce high quality productions.

Earlier in the evening we had asked our members to vote for or suggest a new name for our Video Editing (Linear) SIG. Since the introduction of the new Studio DC10 plus, a non-linear video editing program based on the pure linear program Studio 400, the word "Linear" no longer describes our activities.

The main topic of the July meeting will be sound in video. Don Hawkins, ex-sound engineer at the ABC, will talk to us about this subject particularly in relation with Studio 400 and DC10 plus.

During the second half of that meeting we plan to demonstrate how to use sounds and music from audio and videocassettes and from the Net with these programs.

We also want to show how to cut and adjust music to fit our video productions. Don Hawkins will continue his talk about sound and microphones at our August meeting, so it looks like our future meetings will again be informative and entertaining.

All members, their partners, friends and other visitors interested in video and video editing are welcome.

Windows

» *Bob Mayston*

We had another capacity meeting including one new member. The swap and sell table was well patronised, including some software "Free to a good home".

As usual Lynn Pollock opened the meeting with the question and answer segment with the questions continuing to roll in. Here are a few highlights.

- In Windows 98 Norton Utilities v3 hangs the machine. Understand an update is coming
- A member wants to add another hard disk to machine with existing Win 95. With the new disk take the opportunity to upgrade to Win 98. Will Win 98 recognise data files from Win 95?. Answer: Yes, but good idea to back these up before upgrading
- A member was downloading book text from the browser directly to a printer. After a period the printer refused to continue. Could only be restarted after deleting the temp files and clearing the history
- Most members had installed IE5 over IE4 without problem, provided it was the final full version. Suggest to take the custom installation not minimal so as to include the updated Outlook Express v5
- Problems with a modem dropping out on connection as reported last month traced to proximity to powered speakers. Relocation of the modem solved problem.

Next came the welcome reappearance and distribution of the "Tips and Trick sheet". Lynn summarised these and elaborated on some, particularly the Xcopy command. The new Win 95 version can copy long file names without truncation. It can be used to copy one drive to another or for backups.

Another topic was files that could be deleted to free up space. Another tip covered things that can improve the speed of the system at Boot-up. These tips are only distributed to attendees, so its another good reason for a "live" appearance at our meetings.

Next we briefly looked at Windows 98 version 2. This basically is Win 98 plus all patches issued to date plus "share-a-modem" program. It includes the latest version 5 of Internet Explorer and Outlook Express. This version is now being issued with all OEM equipment. For others the patches update CD is available from Microsoft.

After a coffee break we looked briefly at Office 2000. The installation, although lengthy, was without incident We only had time to look at one module—Word. One new feature was the ability to place the cursor on any part of the page and type. Someone suggested opening multiple documents also opened multiple copies of Word. Reference to loaded programs (Control+Alt+Delete) however showe only one copy of Word was loaded irrespective of documents open.

We will return and explore Windows 98 version 2 in greater depth when it has been in use a little longer and more members have experience with the upgrade.

Remember, if you have a problem related to Windows arrange with Lynn before the meeting to have a hands-on workshop demonstration at the meeting to help solve your problem. Our meetings are held on the first Monday of each month, January excepted, at 7 pm in the Club rooms Dorcas St, South Melbourne, All visitors most welcome.

Members' free ads

FOR SALE

pson FX 100 (x2). HP eskjet 1200 with all books.

lake an offer.

ate 9248 5911 BH

oll's House: two storey, vooden with pink roof and im with curtains. Two doors hat open out. EC. $170

anya 9817 3717

BA Live '96. $10
uro '96. $10
oom 2. $5

ill 9401 3453 or
ulenta@melbpc.org.au

ardware

86/66 with 16 MB RAM, 00 MB HDD, 3.5-inch FDD, nouse, keyboard, monitor. 220 ONO

entium Pro M/B—New in ox with manual. $50

oftware

ldus PhotoStyler v2 for Vindows. CD and user uide in unopened pack. $25

Microsoft Money 98. CD and nanual in unopened pack. $25

otus Smart Suite 97. CD nd all documents in nopened pack. $35

uarterdeck Internet Suite v2 or Windows 3.1 and 95. $15

S/2 v2.1 In box and nused. The 20 disks are till in sealed packs. $10

lorton Utilities v2 for NT4 CD, Reg card and box). $40

lorton Anti Virus for Win 95 disks and manual in box). $20

lorton Utilities for Win 95 disks and manual in box). $25

Games

A-10 Cuba! (Flight Sim) CD. $10

dmark Imagination Express —Rain Forest. $15

dmark Stratergy Challenges CD). $15

Muppet Treasure Island (3 CDs). $15
Microsoft Golf (CD). $5
Microsoft Dinosaurs (CD). $10

Microsoft Musical Instruments (CD). $10
Earthworm Jim (CD). $10
The Farmyard (CD). $15
Mechwarrior 2—Win 95 Version (CD). $15
Zork Nemisis (3 CDs). $15

Books

Microsoft Office—Expert Solutions. 1000+ pages and CD for Office 95 (Que). $30

Using Windows 95 with Internet Explorer 4. 1000+ pages and CD. Very comprehensive. (Que). $40

Making the Most of MYOB —The Basics and Beyond. (MYOB for Australian and NZ Users). $25

Idiots Guide to Microsoft Access 97 (Que). $20

Windows 98 for Dummies (IDG). $15

More Windows 98 for Dummies (IDG). $15

MCSE Training Guides for Windows NT Workstation 4. Microsoft Approved guide published by New Riders with (unopened) CD-ROM As new hardback (RRP $100). $35

Java 1.1 Certification Training Guide for the Sun Certified Java Programmer and Developer Exams. The guide is published by New Riders with (unopened) CD-ROM. Hardback edition in "as new" condition—Published in 1998 (RRP $100). $35

Teach Yourself Database Programming with JDBC. Over 500 pages and includes (unopened) CD-ROM. Published by Sams Net (1998)—"as new" condition. $35

Web Development with Microsoft Resources Covers Frontpage, ActiveX, IIS, Access, NT and SQL Server and more. Over 750 pages with (unopened) CD. As new. $35

Access 2 Developer's Guide —Second Edition Over 1200 pages (Retails at. $99) (Sams Net) As new. $40

Upgrading and Repairing PCs —Eighth Edition by Scott Mueller. Over 1100 pages of information plus unopened Technical Bookshelf CD. $40

Peter Norton's Complete Guide to Windows 95. Very detailed Windows 95 reference book—over 1100 pages which covers all there is to know about Win 95 (Includes OSR2 version) Published by Sams Premier. $40

Quicken 98—6 in 1. Over 550 pages covering all there is to know about Quicken 98 (v.6) (Que) As new. $30

Using Microsoft Word 97. 500 Pages—Hardback Edition. $35

Website Sound—adding sound and audio feeds to your Web site. $15

Adobe Photoshop 3—Filters and Effects. Comes with CD and 3rd party plug-ins. $25

Fine Art Photoshop—Lessons in digital drawing and painting. $25

The Australian Internet Book —1999 Edition. Comes with 50 Hours Free Ozemail Internet CD (unopened). $25

Using Internet E-mail—Special Edition. Complete Reference book (680 pages). $25

Inside AutoCAD 14. Over 1000 pages plus (unopened) CD (Retail $99.95). $45

John 9557 1535 or jv@melbpc.org.au.

Noncommercial advertisements from members, for Swap, Wanted, For Sale, Free, etc, are run free of charge.

Advertisements can be submitted in any of the following ways:

- Uploaded as a file (NB: not a message) to the BBS in ASCII format to area PCUP
- E-mailed to prod-mgr@melbpc.org.au
- Delivered to the Group's Office as an ASCII file on a non-returnable MS-DOS diskette, but as these are collected infrequently you may miss a deadline.

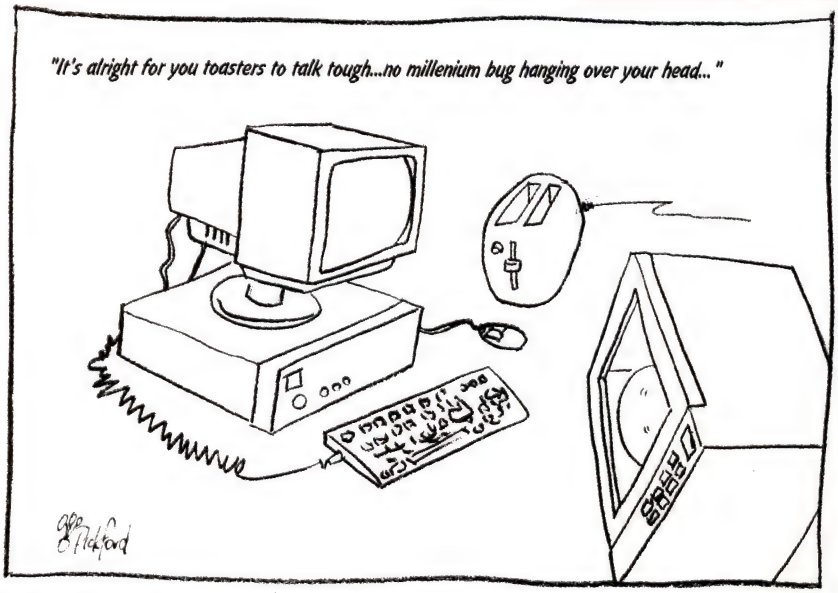
Please follow the format shown, i.e. description (unformatted) followed by price, for as many items as you wish. Follow this with your optional name, mandatory phone number and other contact details.

Advertisements must include at least one phone number — if you only want replies via the BBS or Internet, only advertise there.

We do not have the time to type your ads, so this service is only available for electronic ads.

Infected disks are thrown away, with no attempt to disinfect or recover data!

Members' ads will be included in the first available issue of *PC Update*. ❑



TUTORIAL

Ian Wilson, Xiaoya Li and Noel Crask

Client/server security issues

This article investigates some of the security issues that organisations must address when implementing client/server distributed database systems.

In a traditional centralised system, with dumb terminals, it is the operating system in the host computer that performs all the processing necessary for the operation of that system. All the screen handling, program logic, referential integrity checks, verifying the integrity of users wishing to use system resources and similar functions is done on that central computer. The terminals simply provide a view into that computer. [1, 3]

In client/server systems where the data may be distributed across multiple servers and sites, each with its own administrators, centralised security services are impractical as they do not scale well and more opportunities are available for intruders to access the system. The client PCs often run operating systems with little or no thought to security and the network connecting clients to servers is vulnerable.

Security is a concern from both a technical and management viewpoint. It is critical to examine the needs of the business and develop a security policy that addresses both of these issues.

Client/server systems

Prior to addressing individual security issues a brief explanation of client/server computing is required. Client/server is an architecture in which a system's functionality and its processing are divided between the client PC and a database server. System functionality, such as programming logic, business rules and data management is segregated between the client and server. [4]

Client/server computing comprises three building blocks:

- The client
- The server (may be more than one)
- The network (tying the client and server together).

A logical and physical separation exists between the client and server and the client/server system co-ordinates the work of both of these components and efficiently uses each one's available resources to complete assigned tasks. This separation of client and server provides an open and flexible environment where mix and match of hardware and operating systems is the rule. The network ties everything together. Today the client applications run predominantly on PCs connected to a network (or LAN). The servers are also connected to the network and know how to connect to their clients.

Security is often not given the consideration it requires in client/server partly because the implementation of security represents a cost that does not reflect an immediate return and partly because purchasers are often not aware of security issues and buy the cheapest client because they can get more for their dollar. [1]

Security in client/server

The distribution of services in client/server increases the susceptibility of these systems to damage from viruses, fraud, physical damage and misuse than in any centralised computer system. With businesses moving towards multi-vendor systems, often chosen on the basis of cost alone, the security issues multiply. Security has to encompass the host system, PCs, LANs, workstations, global WANs and the users.

However, every level of system security requires dollars and additional steps for the users. The cost and inconvenience (to the users) associated with security must be balanced against the cost and inconvenience of corrupted or insecure data. [2]

The client

As the primary front end device of a client/server system the desktop is typically the least mature with respect to security. Where the mainframe environment had a period of steady growth for more than 20 years, with the demand for security products that went with that growth, client/server has increased in popularity only since the early 1990s, and its hardware components, including the PC, has not been subject to the same security considerations that the mainframe has.

The client machines pose a threat to security as they can connect to the servers, and access their data, that are elsewhere in an organisation. One large problem is that they are easily accessibl and easy to use. They are usually located in open plan offices that present a pleasant environment for users (and intruders) making it impossible to lock them away when unattended. Products are available that offer a measure of physical security by locking or bolting equipment and cabling into place.

Physical protection for the client machines can include disk drive locks, or even diskless workstations to preven the loading of unauthorised software and viruses. The cases can be fitted with locks to prevent access to the hard drives, and memory. [4]

One of the greatest risks with the client workstations is that the operating system is easily and directly accessible to the end user which exposes the whole system to a number of risks. The workstation operating system assumes that the person who turns it on is the owner of all files on the computer, including the configuration files. Even if the client/server application has good security, that security might not be able to counteract attacks at the operating system level which could corrupt data passed to other tiers of the client/server system. The tighter security now being offered with Windows NT addresses some of these issues.

Often client machines are bought based on cost alone, but in this case the cheapest may actually cost the company more as additional security features are added. Weak cases have to be strengthened to prevent opening and supplied

perating systems replaced with more obust ones, for example the login pass-ord can be bypassed on Windows 95 nachines whereas Windows NT V4.0 revents access to the file system until uthenticated but it costs two to three imes more.

he network

he network connecting clients and ervers is a less than secure vehicle that ntruders can use to break into com-uter systems and their various esources. Using publicly available tilities and hardware an attacker can avesdrop on a network, or "sniff" the etwork to read packets of information. hese packets can contain useful nformation, e.g. passwords, company etails, etc, or reveal weaknesses in the ystem that can be used to break into he system. [1]

ncryption of data can solve the roblem of attackers sniffing the net-ork for valuable data. Encryption nvolves converting the readable data nto unreadable data. Only those nowing the decryption key can read he data. A problem here is that some etwork operating systems don't start ncryption until the user has been uthenticated (i.e. the password is sent nencrypted).

Most systems employ re-usable pass-ords for authenticating users which llows an attacker to monitor the etwork, extract the login information nd access the system posing as that ser. Even if the password is encrypted he intruder can just inject that packet nto the network and gain access. The roblem is compounded when, to naintain that single system illusion, nly one login is required to access all ervers on the network. Customers ant a "single system image" of all etworked computing resources, in hich all systems management and dministration can be handled within a ingle pool of system resources. [1, 7]

o have a secure network it must onform to four basic principles of a rusted computing base (TCB):

- Identification and authorisation
- Discretionary control
- Audit
- Object re-use.

he fundamental aspect of the TCB is hat if you can trust all of the security eatures, then the network can also be rusted. The TCB must be self protected gainst tampering and malicious, inadvertent altering and attempts to circumvent it. [1]

The National Computer Security Centre's (NCSC) evaluation model specifies a C2 level of security that provides the above features. C2 is a defined level for operating systems requiring users and applications to be authenticated before gaining access to any operating system resource. All clients must provide an authenticated user ID, access control lists must protect all resources, audit trails must be provided, and access rights must not be passed to other users that re-use the same items. [1]

User authentica- tion can be managed by the Kerberos authentication mechanism. The Kerberos protocol, with add ons introduced by the Open Software Foundations Distributed Computing Environment (OSF DCE), fulfills the authentication requirement of C2. Kerberos is a secret key network authentication system that uses DES for encryption and authentication. It authenticates every user for every application. It consists of three distinct services that provide access to network resources, Registry, Authentication and Privilege Servers. [7]

In DCE, users, servers and client computers are all referred to as "principals". The Registry server creates user accounts for the network principals and unique user IDs are created and stored with other information in the security database. At the time of logon, the DCE security system uses encrypted "keys" that reflect private validation information, such as a principal's password, the server and services or data required. This process of validating a principal through credentials is known as authentication. At the time of the logon request, a logon request is submitted to the Authentication Server. [6, 7]

The Authentication Server responds to the logon service by forwarding a ticket that is encrypted using the user's secure key. Once received by the logon service, an attempt to decrypt the ticket is made using the password supplied by the principal. If a valid password has been supplied, a new ticket will be created by the logon service. This ticket is then forwarded to a Privilege Server, where a new ticket is created that will be used to provide access to a specific application server and the specific services required. Properties of the Kerberos tickets include encryption of the ticket to insure its authenticity. If any data within the ticket is modified, the ticket becomes invalid. Further, tickets are issued with a specific time duration to protect against an attempt to modify, copy, or utilise someone else's ticket. The DCE Security Service is designed to allow applications to authenticate not only users, but servers as well. This is provided with each application server having again its own secret key that can be used by the security service to send packages that only the true server can decrypt. [6, 7]

Once the client receives the ticket, it presents the ticket and request to the targeted server. The server then compares the incoming ticket with the ticket from the Kerberos server to verify that the client has access. [6]

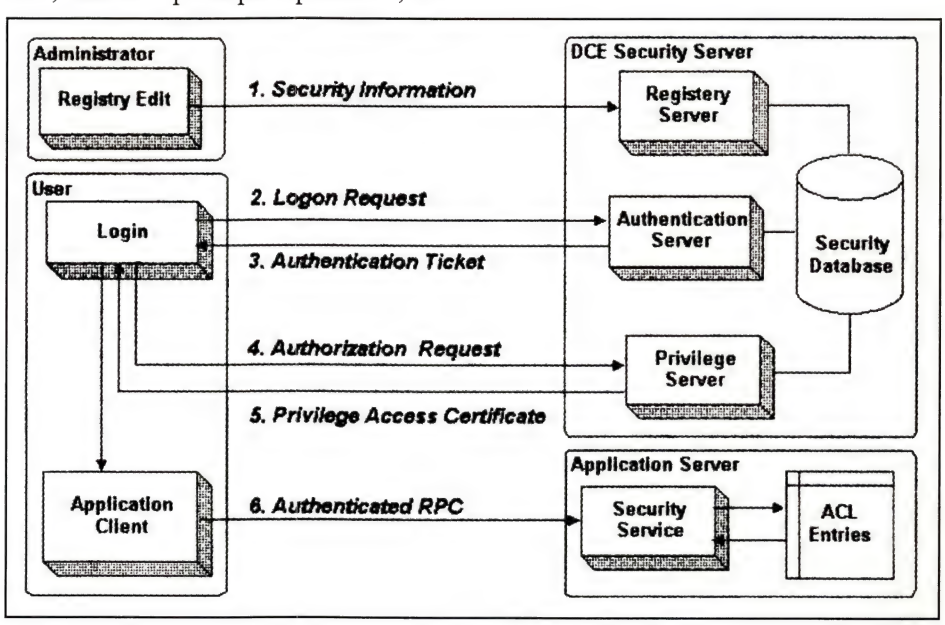


Figure 1

Applications, files, and other DCE services then use Access Control Lists (ACLs) to identify specific access privileges of a principal, whose individual or group identity is provided via the ticket. An ACL might identify whether a principal has read, write, test, or other permissions against a file or records within a database. If the ACL permissions match the action requested, the access is granted; otherwise, the RPC call is denied and a result returned to the calling application. [1, 7]

The purpose of the DCE Security Service is to provide a security architecture that provides both users and servers the ability to communicate in a manner which is very difficult to impersonate. This allows servers to offer service only to authorised users, and it allows users to have confidence that they are communicating with the "real" server. An illustration of the DCE RPC authentication and application access sequence is shown in Figure 1. [7]

Audit services allow network managers to monitor user activities, including attempted logons and the file servers or files used. It is achieved by monitoring all user workstations and recording transaction activity. Most network operating systems support audit trails. Securing the network also requires securing the devices. This is particularly important on the devices that interconnect large parts of the enterprise, such as the backbone or campus routers. These devices should be in one spot or in secure rooms placed strategically around the enterprise. They can be engineered to generate an alarm (raise a management event) if the cases are opened, module removed or if anything is changed.

Additional levels of security are also provided by building in rules, filters and screening into the interconnecting devices. For example, a router can be configured to only allow certain IP addresses access to a segment of the backbone. [6]

The server

The first line of defence for the server(s) is to have the server centre in a secure location where access, by authorised personnel only, can be supervised and administration can be performed simply. The server should be attached to an uninterruptable power supply as this protects the server by filtering the mains and provides backup power should the supply fail. This allows the server to shut itself down in a controlled manner to protect data. [4]

The servers should be protected with the level of password security applicable to the business. Upgrades to the server software should be planned, monitored and controlled with updates done out of hours. Virus protection should also be active on PC-based servers.

To ensure privacy of the data the entire contents of the database can be encrypted using either cryptogram or advanced DES encryption mechanisms. The level of encryption is dependant on government regulations. For example, SQLBase supports a minimum of 40-bit encryption.

Some database systems, e.g. Oracle, can validate database users without database passwords by using information in the hosts operating system authentication mechanism. This simplifies the database security administration as it is centralised at a system level. However, the problem with this is that often the database user does not have to start a host session on the database server before using the database across the network, effectively bypassing the operating system security mechanisms.

Many client/server database systems do not have adequate password management facilities similar to those found in operating systems. This means that there is no easy way for the database administrator to ensure that users have chosen good passwords and will change them frequently. Most database systems allow users to change their passwords using simple SQL utilities. Unfortunately these SQL utilities do not force the user to verify the current password prior to changing it. Therefore, it is easy to change another user's password. Third party database password management utilities are starting to appear which address the above deficiencies. [1]

To guard against "trial and error" login attacks to a database, servers can impose increasingly long delays in responding to a user, with additional mechanisms to alert other users in the event of a protracted attack.

Server database software vendors are now extending their products to include government specifications for multilevel data security. Database management systems can offer their own security, for example, Sybase uses stored procedures to define, limit and authorise user access. By storing the security within the database, no data can be accessed without going through the security checks. [2]

The integrity of the database can be maintained by guaranteeing that data cannot be changed except through the control of the database. Page checksums enforce this.

The users

The first line of defence against illegal entry to a multi-user client/server system is user identification and authentication. It follows, that the easiest way to gain illegal entry to the system is by obtaining a valid users ID and password. The problem with keeping passwords secret has been around since passwords were invented. For example, they can be discovered when:

- The user picks a short password or one that is easy to guess, such a spouse's name
- The user keeps a list of passwords taped on the screen or in a desk drawer
- The users share their passwords with other users
- An attacker phones the user, posing as one of the companies IT staff, and requests the user's password to fix an unnamed problem.

To overcome this a good security policy and strong password management must be implemented. A security policy will set guidelines for minimum password length, types of passwords that can be chosen, how often passwords should be changed, and so on. Password management utilities are available to check for guessable passwords for minimum lengths and regularly ask users to change their passwords. [1]

Conclusion

There is no one solution that addresses all security issues raised when implemeeting a client/server system. The view to the users must be that of a single homogeneous system when the reality is that it is a system made up of multiple levels and parts, each with its own security issues.

The enterprise security policy should encompass the physical security of devices, including the physical media in which the data is carried, the backup of critical data, which should not be stored on a desktop where it can be copied to a diskette and the integrity of the network and the database through authentication and access control.

Users are often not receptive to mandatory security procedures because the very measures used to keep attackers out are just as effective at keeping the users out. One solution is to carry out as many of the security measures as possible at the network level rather than at individual workstations. This can be achieved in a network operating system that supports OSF's DCE (i.e. Kerberos).

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About the authors

Ian Wilson is completing his Bachelor's Degree in Computing at Monash Caulfield, Xiaoya Lin is doing research in rule-based systems towards his Doctorate and Noel Craske is a Senior Lecturer at Monash. ❑

MELB PC USER GROUP **NEWS**

Ash Nallawalla

PC Update survey results

There has been an unprecedented response to the *PC Update* survey, largely owing to its Web-based option. Although there were over 80 questions, our readers took to them with gusto. There isn't the room to display the graphs and the textual comments, but they will be made available online after the other two surveys have been completed.

About 1070 people had responded at the time of writing, but not everybody answered all questions, so some of the totals may not appear to add up. Some paper responses had not been keyed in, but the later responses don't appear to be changing the averages. The later Membership and Internet Service surveys are showing similar responses where a similar or identical question was posed.

The survey package, *WebSurveyor* can only compute a simple mean, but it can output in FoxPro and Comma Separated Variable (CSV) formats, in case some member wishes to help with a better analysis.

It is premature to draw conclusions from this survey, but the results will be valuable to the magazine editors, committee, volunteers and others. Thank you all for your co-operation. Now on to the raw results.

Demographics

Q In what state/country do you live?

VIC	1046
NSW	5
QLD	4
WA	4
SA	3
NT	1

Q How would you describe your general computing proficiency (as concerns your personal computing needs, not as compared to others)?

Beginner	36
Intermediate	483
Advanced	436
Expert	101

Q Years since you first joined Melb PC (Say 1 if less than 1)

Average 5 years

1 year	122
2 years	109
3 years	152
5 years	138
6 years	59
7 years	37
8 years	62
9 years	18
10 years	67
11 years	8
12 years	27
13 years	5
14 years	5
15 years	9

Q What is your age?

Average 51

13 to 18	26
19 to 24	16
25 to 30	21
31 to 36	67
43 to 48	179
49 to 54	177
55 to 60	137
61 to 66	121
67 to 72	108
73 to 78	44
79 to 84	4
85 to 90	1

Q What is your sex?

Male	934
Female	103

Q Family pre-tax income

Average $61,000

Q In which industry do you work or did work if you are no longer working?

There were so many "Other" responses, that we learnt only two facts:

* Our members mostly come from occupations other than computing

* Our top three industries are Pharmacy/Medicine/Health, Engineering, and Education.

Q Approximately, how many people work in your organisation at all locations?

Average 4431

PC Update

Q How many people (including yourself) read your copy of *PC Update*?

Average 2

Q Importance of *PC Update* to you as a component of Melb PC membership, namely, was it the main or secondary reason to join?

Secondary reason	835
Primary reason	204

Q How timely has delivery been for the last 3 issues?

Timely	1005
Late	27

Q How many issues have been delivered in the last 3 months normally (without your having to ask the office for a replacement)?

0	37
1	17
2	53
3	926

Q When do you discard each issue of *PC Update*?

Unread	10
When read	66
Within 3 months	47
Within 6 months	62
Never	456
Undefined period	409

Q What percentage of pages do you usually read?

Average	72%

Q How do you rate the layout of text, columns, use of colour, and images?

Poor	19
Acceptable	178
Good	602
Excellent	247

Q What do you think of the fonts used, their size and readability?

Too small	24
Acceptable	582
Just right	436

Q What do you think of the quality of editing, namely spelling, grammar, structure, flow, and so on?

Poor	7
Fair	81
Good	687
Excellent	266

Q How likely is a *PC Update* review to influence your purchase decision compared to reviews in commercial publications?

Unlikely	85
Less likely	117
More likely	657
Very likely	187

Q Likelihood to buy from a *PC Update* advertiser, compared to a non-advertiser, assuming everything else is identical

Don't know	252
Unlikely	65
Likely	538
Very likely	192

[Ed: In the following tables the"Rank" indicateds the overall relative *importance of the topic, on a scale from 0 to 10, as perceived by the respondents in relation to the other topics surveyed.—PS]*

Coverage desired...

	None	Less	Same	More	Rank
PC hardware	6	21	417	565	10.0
PC accessories	5	14	457	523	9.8
Utilities	4	23	463	525	9.7
Internet—How to	16	72	382	559	9.4
Home Office	15	40	487	484	9.1
Windows 9x	14	38	497	463	9.0
New product news	5	15	567	418	9.0
Internet—Web surfing	9	65	470	478	9.0
Melb PC news	1	41	684	288	7.9
Multimedia	11	70	602	323	7.9
Computer Telephony Integration	44	102	494	366	7.5
Educational	30	120	527	337	7.3
Laptops	99	188	182	522	7.2
Advertising	18	49	778	184	6.9
Internet—Web authoring	28	166	499	317	6.9
Graphics	19	141	627	224	6.5
Spreadsheets	49	130	579	258	6.4
Databases	52	143	539	273	6.4
Business	25	147	680	164	6.0
BBS	102	184	528	194	4.8
Articles by CEOs	84	190	611	115	4.4
Committee minutes	108	191	579	139	4.3
Programming	123	227	448	196	4.2
Windows NT	161	202	416	200	3.8
Unix/Linux/*ix	217	176	330	264	3.7
Cartoons	125	258	494	142	3.6
Palmtops	196	246	405	149	2.6
Games	181	332	370	122	2.1
BeOS	348	174	369	57	0.0

How often do you read...

	Never	Sometimes	Usually	Always	Rank
President's page	25	150	286	575	10.
Editorial	30	164	318	524	9.
Features	2	170	525	333	7.
Reviews	12	221	493	285	6.
Random access	52	276	341	353	6.
Discounts	49	374	332	268	4.
Members free ads	87	356	304	285	4.
Advertisements	39	411	438	138	3.
SIG pages	105	412	302	208	2.
Shareware library	121	407	276	227	2.
Training courses	149	488	262	127	0.

Home PC and peripherals

Q What is the average age of your home PC or PCs (in years)? If the PC has been gradually upgraded, treat the CPU as the determinant of age.

< 1 year	171
1-2 years	348
2-3 years	313
3-4 years	128
4-5 years	48
>5 years	33

Q What brand of CPUs are in all your home PCs? (Tick all that apply)

Intel	799
AMD	166
Cyrix	138
IBM	113
Don't know	41

Q How much memory (RAM) is in your main home PC? (Choose lower value i you have some intermediate value)

256 MB	5
> 256 MB	5
< 4 MB	4
8 MB	16
16 MB	85
32 MB	365
64 MB	438
128 MB	115
Don't know	6

Q What is the speed of your main home PC?

<100 MHz	66
100–199 MHz	343
200–299 MHz	302
300–399 MHz	222
400 MHz	35
450 MHz	21
> 450 MHz	8
Don't know	43

Q What is the total capacity of the hard disk/s in your main home PC?

< 2 GB	197
2–4 GB	406
5–6 GB	194
7-8 GB	71
> 8 GB	155
Don't know	19

Q What operating system is used on your main home PC most of the time? If you have two or more used equally, flip a coin!

Windows 95	561
Windows 98	403
DOS+Windows 3.x	30
Windows NT	29
Linux	8
OS/2	7
Mac	1
Windows CE	1
DOS	1
Don't know	0

Q What is the speed of your main modem in bits per second?

No modem/don't use	7
Don't know	10
14,400 or less	38
28,800	179
33,600	278
56,000 V.90	313
56,000 K56Flex	180
56,000 X2	30
ISDN modem	1
Cable	4

Q Which of the following computer peripherals do you own? (tick all that apply)

The list is too long to be reproduced here, but multimedia devices are standard accessories these days and top the list. Next came ink-jet printers, followed by modems.

Q Which of the following do you intend to buy in the next 6 months? (Select main item, then add others in the "Other" category)

At the top of the shopping list are a scanner, new computer, more memory, and CD-Rewritable drive.

Q In the past 12 months, how much did you spend on hardware, including consumables?

< $250	233
$250-499	172
$500-999	207
$1000-1999	200
$2000-4999	171
$5000-9999	42
$10,000 or more	7

Q In the past 12 months, how much did you spend on software?

< $250	400
$250-499	284
$500-999	206
$1000-1999	99
$2000-4999	25
$5000-9999	3
$10,000 or more	1

Work Environment

Q Where does your organisation buy its desktop computers? (Dell and Gateway are examples of Direct vendors)

Direct vendor	244
Don't know	181
PC reseller	167
Value-added reseller	71
System integrator	51
Other	45
Swap meet	15
Department store	12

Q Where does your organisation buy its network servers? (Dell and Gateway are examples of Direct vendors)

Don't know	233
Direct vendor	183
PC reseller	71
System integrator	47
Value-added reseller	46
Department store	3
Swap meet	3

Q Where does your organisation buy its PC software?

Don't know	256
Value-added reseller	105
PC reseller	136
System integrator	78
Mail order	75
Department store	51
Other	38
Swap meet	17

Q What is your level of influence over computing purchases at work?

None, N/A	448
Decide	162
Suggest	109
Recommend	112
Approve	110

Q What is the annual value of the PC-related hardware expenditure that you influence?

< $1000	365
$1000-4999	203
$5000-9999	100
$10,000-49,999	82
$50,000-99,999	21
$100,000-299,999	23
$300,000-499,999	4
$500,000-999,999	6
$1,000,000 or more	7

Q What is the annual value of the PC-related software expenditure that you influence?

< $1000	466
$1000-4999	181
$5000-9999	68
$10,000-49,999	42
$50,000-99,999	19
$100,000-299,999	9
$300,000-499,999	6
$500,000-999,999	4
$1,000,000 or more	7

Q How much will your organisation spend on computing goods and services over the next fiscal year?

< $5000	290
$5000-9999	77
$10,000-24,999	52
$25,000-49,999	35
$50,000-99,999	42
$100,000-249,999	46
$250,000-$1,000,000	47
>$1,000,000	118

Q What is the primary Network operating system at work?

Don't know, N/A	223
Windows 3.11	28
Windows 95	186
Windows 98	79
Windows NT	227
Novell	79
Linux/Unix	30
Other	11
Macintosh	4
LANtastic	3
OS/2	2
Banyan Vines	2

Q What is the operating system on your primary work PC? (can be a desktop or laptop)

Windows 95	392
Windows 98	159
Windows NT	149
DOS+Windows 3.x	49
Don't know	29
Macintosh	5
Linux/Unix	3
DOS	2
OS/2	2
Applixware	1

Q How old (in years) is your primary work PC? If the PC has been gradually upgraded, treat the CPU as the determinant of age.

< 1	260
1-2	253
2-3	174
3-4	64
4-5	35
> 5	18

Q How much memory (RAM) is in your primary work PC? (Choose lower value if you have some intermediate value)

256 MB	5
> 256 MB	3
< 4 MB	12
8 MB	21
16 MB	86
32 MB	269
64 MB	249
128 MB	81
Don't know	82

Q What speed is your primary work PC?

< 100 MHz	65
100–199 MHz	237
200—299 MHz	230
300—399 MHz	132
400 MHz	20
450 MHz	10
> 450 MHz	7
Don't know	102

Q What is the total capacity of the hard disk/s in your primary work PC?

< 2 GB	213
2-4 GB	318
5-6 GB	89
7-8 GB	30
> 8 GB	60
Don't know	91

❑

MELB PC USER GROUP

TRAINING SERVICES

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Info Box

Where are courses held?

At the group's premises, usually in the Training Room. Some courses are held in the SIG room so check when you arrive.

The address is
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South Melbourne VIC 3205

How do I get there?

Usually plenty of parking is available nearby in the evenings or at weekends *or* tram to corner of St. Kilda Rd and Dorcas Street and walk one block down Dorcas Street.

Important!

You will obtain greater benefit from a course if you have the skills recommended by trainers as prerequisites for their courses. Otherwise, you may not be able to keep up with the class practical sessions.

How do I book a course?

Please use the order form on page 31 or (for credit card orders only) phone or fax the office (numbers on page 3).

Early enrolment is advised as places are limited. Enrolments/bookings without payment will **not** be accepted.

I have something to say!

You can contact Training with suggestions for courses or other training-related matters by sending e-mail to Ian Rankin at *irankin@melbpc.org.au*

Application courses

Quicken for Small Business $180

Viv Martin
Four 3-hour sessions.
6.30 pm–9.30 pm,
Tue 10, 17, 24, 31 Aug.
Bookkeeping, record keeping, producing reports for accountants using Quicken or Quicken for Business.
Prerequisites: Basic Windows experience. Ideally, ownership of the latest Australianised version of Quicken for Windows.

Introduction to PowerPoint $45

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Wed 15 Sep.
An introduction to the capability of the tools, using the templates and wizards, creating graphics and creating standard slides. Students will create presentations that can be given as on-screen shows or printed for use on an overhead projector. This course is a must in preparation for your next meeting/ conference delivery.
Prerequisites: Familiarity with Win 9x including mouse and keyboard skills.

Intermediate PowerPoint $45

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Thu 19 Aug.
A more in-depth perspective to creating presentations using enhanced graphics and special transformations from slide to slide. Students will create presentations that can be given as on-screen shows or printed for use on an overhead projector. This course is a must in preparation for your next meeting/ conference delivery.
Prerequisites: Familiarity with Win 9x including mouse and keyboard skills. This course also assumes familiarity with Powerpoint in creating basic slides and basic graphics or attendance at the Introduction course.

Introduction to Access 8/97 $162

Peter Fallon
Three 3-hour sessions.
6.30 pm–9.30 pm,
Wed 11, 18, 25 August.
Introduction to database concepts. Learn how to create an access database, and build simple queries, forms and reports. Most importantly, how to use the online documentation, and where to go for information when you need it.
Prerequisites: Prior knowledge of databases or Access is not required. A working knowledge of Win 9x is assumed.

Using Microsoft Word 7 $75

Caroline Houston
One 3-hour session.
6.30 pm–9.30 pm, Thu 5 Aug.
This course will include setting Tabs, inserting graphics, multiple page documents with headers and footers and creating tables.
Materials: A course manual is provided, but students should bring their own pens and paper for additional notes. A formatted floppy disk may also be useful if students wish to take home exercise files.
Prerequisites: Familiarity with the basic functions of Word.

Internet courses

Note: If you are starting with minimal knowledge, we suggest that the Internet courses are best attended in the sequence shown. More advanced students should attend at their skill level.

1. Introduction to the Internet $45

Lynn Pollock
One 3-hour session.
9.00 am–12 noon, Sat 18 Sep.
An overview of the Melb PC Internet service. Live explanations of all the major programs that make up the Internet. Full detailed discussion of the hardware and software items involved, including modems. General questions concerning Internet connections.
Prerequisites: None.
See also: File management, archiving and compression techniques.

2. Using the Internet with Windows 95/98 $90

Lynn Pollock
One 6-hour session.
9.00 am–4.00 pm, Sun 8 Aug.
This is the basic course for Win 9x users. It suits people about to install Win 9x Internet software or novice users of the Internet who want a full explanation of the basic setup and techniques involved. Hands-on individual installation of 32-bit Internet software. Explanation, discussion and live student Internet connections to demonstrate and practise all the major components.
Prerequisites: Win 9x experience.

3. Advanced Internet Part 1: Effectively using Web browsers $60

Lynn Pollock
One 4-hour session.
1.00 pm–5.00 pm, Sat 18 Sep.
Complete examination and discussion of all the features in the latest versions of both Netscape and Internet Explorer. Configuring, bookmark and favourite management, saving images and data, offline viewing of saved information, effective use of search engines and techniques, and tips and tricks. Students have live Internet connections to practise their searching techniques.
Prerequisites: Students should have attended the basic Internet course or have a good understanding of Internet principles. This is an advanced course.

4. Advanced Internet Part 2: Internet Workshop $90

Lynn Pollock
One 6-hour session.
9.00 am–4.00 pm, Sun 19 Sep.
Complete discussion and live student Internet connections examining all the features that make up the Internet today, with the exception of Web browsers. Students will gain experience with the following: Advanced e-mail, FTP, Archie, Gopher, Finger, Telnet, IRC Network, Internet Phone, newsgroups and list servers, also connection problems and tips and tricks.
Prerequisites: Students should have attended the basic Internet course or have a good understanding of Internet principles. This is an advanced course.

Web Page Design $155

teven Goldate
hree 3-hour sessions.
.30 pm–9.30 pm, Mon 16, 23, 30 Aug.
tudents will learn how to write Web ages for the World Wide Web. This ncludes HTML (Hypertext Markup anguage) basics, use of HTML editors, oth text and WYSIWYG. Students will radually be introduced into the inner orkings of HTML, learning how to write imple Web pages, then progress to ore complex features such as using ables, frames, embedding sound files, corporating public domain JAVA oplets, how to create online slide hows and more. The course will cover uch issues as features of good Web-age design, FTP uploading issues and etting free stuff off the Net. Students ill also learn about and look at irectory structures in HTML and file oloading with FTP.
rerequisites: Students should be miliar with the Internet, using a Web rowser, have some basic editing skills nd be familiar with Windows.

Courses by request

Some courses are available by request subject to minimum student numbers. Please contact the office for details. □

Operating system and hardware courses

Introduction to UNIX $45

Len Krois
One 3-hour session.
6.30 pm–9.30 pm, Thu 23 Sep.
UNIX/LINUX basics for people who want a basic feel for the open systems environment. LINUX is a popular shareware version of UNIX that will run on IBM-compatible PCs. The session includes logging onto a UNIX system, finding your way around, manipulating files, viewing and editing text files, using the online text manual.
Prerequisites: Command line computing knowledge preferred.

Starting Windows 95 $119

Mary Levens
One 6-hour session.
9.00 am–4.00 pm, Sun 25 Sep.
Introduces the computer novice to the concepts and skills required for effective use of the Win 95 environment. Covers basic Windows jargon and terminology, how to accomplish everyday tasks and how to change the way Windows looks and works. Students will receive a comprehensive exercise manual.
Prerequisites: None.

Introduction to Windows 98 $207

Len Krois
Two 6-hour sessions.
9.00 am–4.00 pm, Sat 4, Sun 5 Sep.
This course is for Beginner and Intermediate students. It introduces the computer novice to the Windows 98 environment. You'll get to know your computer, how to use it productively and the skills you'll need to use Microsoft Windows effectively. Materials: A comprehensive Manual is provided and it is recommended that Students bring a pen and paper, as a degree of note taking may be necessary. **Prerequisites:** None. You will however have an advantage if you have had some exposure to computers and have used a mouse.

Advanced Windows 95/98 $90

Lynn Pollock
One 6-hour session.
9.00 am–4.00 pm, Sat 7 Aug.
A full and detailed examination of Win 9x for experienced users. Topics include adding hardware, registry control and editing, backup techniques, communications, networking with Win 9x, conflict resolution, enhancing performance, system maintenance, and many tips and tricks.
Prerequisites: Win 9x familiarity.

Introduction to Programming $135

John Bourke
Three 3-hour sessions.
6.30 am–9.39 pm, Thu 2, 9, 16 Sep.
Introduces you to programming and how to perform the basics of writing software. How to: Create and use variables and arrays, Control the flow of program logic, Use loops, Use and manipulate files, Write a text utility program.
Prerequisites: None.

Introduction to Networking $90

Len Krois
One 6-hour session.
9.00 am–4.00 pm, Sat 28 Aug.
How to connect two or more computers to share computer resources.
Prerequisites: Win 3.1x/9x familiarity.

Introduction to Windows NT4 $117

Maurice Canterbury
Two 3-hour sessions.
6.30 pm–9.30 pm, Mon 2, 9 Aug.
Introduction to the basics of a networking system and how users operate from the Workstation. Understanding of how the network is controlled and administered.
Prerequisites: Familiarity with Win 9x including mouse and keyboard skills. □

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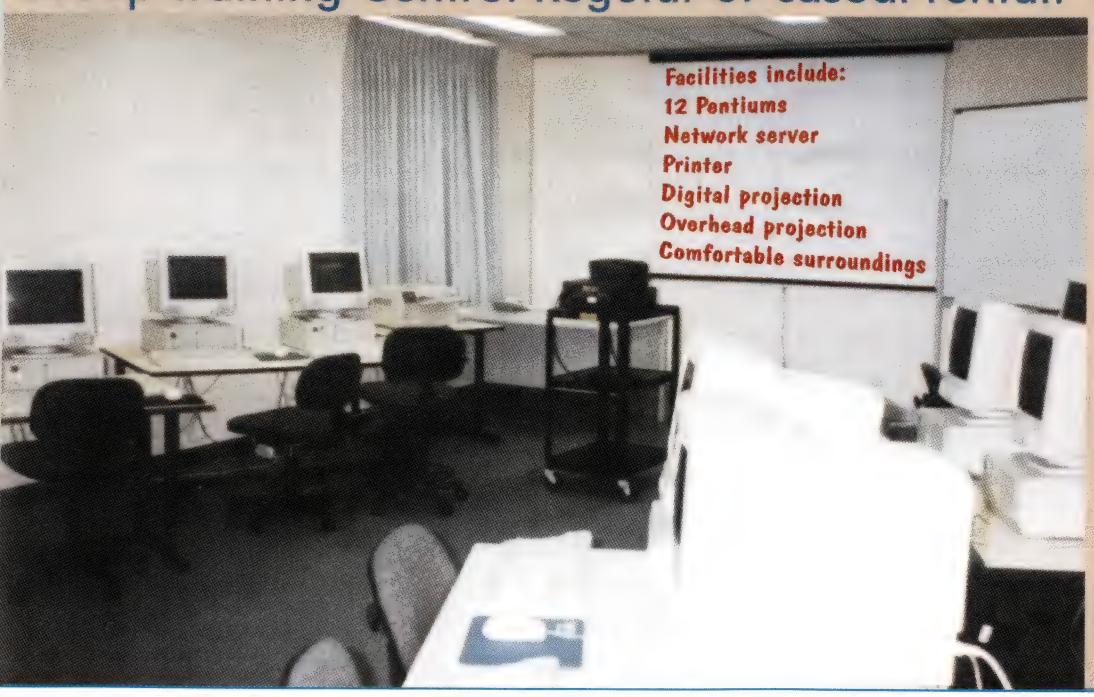
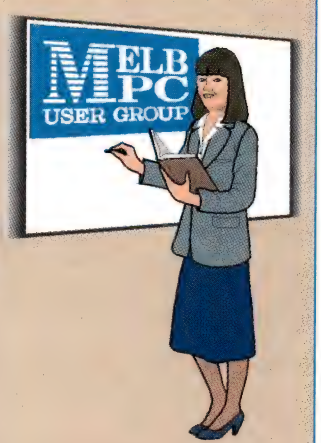




For further information contact:

Melbourne PC User Group Administration Office
27 Dorcas Street
South Melbourne
VIC 3205
Ph: (03) 9699 6222
Fax: (03) 9699 6499

Harold A Driscoll

Apache Web server

Apache is a World Wide Web server, a program that allows your computer to provide Web pages to any computer on your local area network, or also on the global Internet. Apache can be used as a personal Web server on your computer; we'll focus on that use in this review.

A personal Web server is useful on a local network (intranet), for example to share anything from shipping dock activity to human resources policy manuals within your organisation. One is almost essential when authoring Web pages, whether for publication on the global Internet, use on your local system, or being shared on an intranet.

History

Apache was originally developed for and implemented on almost every known version of UNIX, both commercial and free software operating systems including Linux and FreeBSD. Apache traces its roots to the NCSA httpd (Web server) project at the University of Illinois in Champaign-Urbana and through it back to the original CERN Web server.

The Windows (Win32) port first became available in early 1998. It carries this warning:

> *"At present, the Win32 port of Apache is not as stable as the UNIX version. Further releases of the 1.3.x tree will bring the Win32 port closer to parity."*

The nature of a Web server is to run as a daemon (background process). To run effectively, the Win32 version of Apache relies heavily on the services of Microsoft Windows NT.

It will run with Windows 95 and 98. Performance and reliability will definitely be sacrificed if you elect to do so. This might be practical for a personal Web server with light duty.

Popularity

Apache has been the most popular web server on the Internet since April of 1996. Being used by over half of the Web servers on the Internet, it is more popular than all other Web servers combined.

In March of 1999 this was 54.89 percent (2,409,056 host computers), showing a small gain (0.24 percent) over the previous month. As the graph illustrates, the popularity of Apache has remained strong and growing.

The vast majority of Apache use is on UNIX-based platforms such as Sun and Linux. Many are running on server-class PC hardware. As the Win32 port of Apache becomes more robust, I would expect it to command a growing part of the Windows server market, while retaining its UNIX base.

In the Web server market, Microsoft's Internet Information Server (IIS) holds a distant second place, with 23.49 percent in March 1999 (1,030,892 host computers). That reflects a slight 0.04 percent growth over February.

For detailed (and most recent) statistics, as well as the study methodology, see the Netcraft Web Server Survey at *http://www.netcraft.com/survey/*. This is one of the few credible sources of statistics about the Internet. Highly recommended.

Info Box

Apache Web Server version 1.3.4

System required

Windows 95/98/NT or a variety of UNIX platforms.

Availability

An Open Software program developed by the Apache Group. Information and free download are available from *http://www.apache.org*.

Installation

Download was quick, just under 3 MB from *http://www.apache.org*. As luck would have it, I downloaded and installed version 1.3.4 just one day before 1.3.6 was released.

Apache uses a text configuration file. Version 1.3 has simplified things somewhat, combining the three traditional NCSA files into one. The file httpd.conf now contains everything, and comes with generous comments. The installation program fills in many of the details, particularly file names and paths. I only needed to add a few lines to get it working, and a few more to represent the virtual directories of my previous server.

I was so happy with the simplicity of Apache, as well as the performance that I decided to install it on my laptop as well. Also running Windows NT 4.0, I already had the latest version of Microsoft's Personal Web Server installed and running.

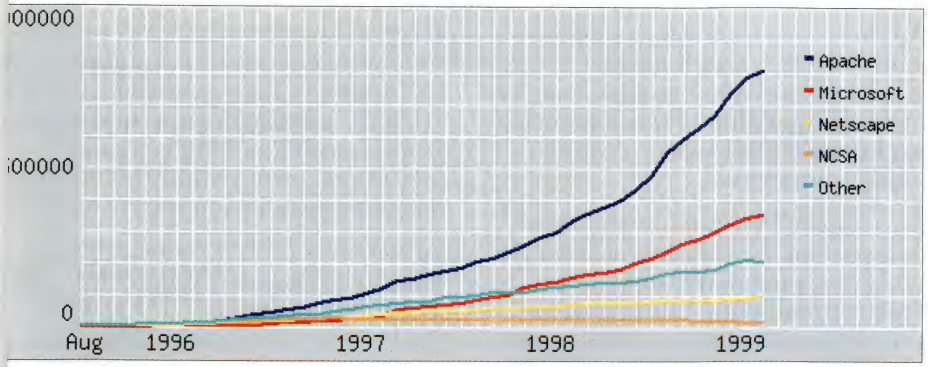
Under Windows NT Apache can be run either as an application, or as a service. For me this was a no-brainer, it would run as a system service. The installation process does install a hotkey that adds Apache as a service, or it can be done by running

```
apache -i
```

once from the command line. It doesn't actually start Apache, so that needs to be done manually the first time. Thereafter, when you reboot your system, it will start automatically.

I did find it useful to run Apache as an application until I got the configuration files right. Only took a couple of tries. My one omission (for my laptop) was clearly identified, as were a few typos.

On my laptop, I added a pair of NT hardware profile settings, one running Apache, and one running Microsoft PWS. While in the neighbourhood, I did add a third, with no Web server running. This is actually quite easy to



ure 1 Growth of Internet Web sites, August 1995 – March 1999

. From the Control Panel, System plet, the Profiles panel is used. Then, om the Services applet, I just selected e Apache and then the MS Web rvers, indicating whether they should used for each hardware profile.

stallation did hit one minor snag, ith not all of the files being installed the first try. This corrected itself ite simply by reinstalling the product.

ocumentation is good, extensive, but mewhat weak on introduction aterial. I had to wander around a bit, find that the directive I needed for rtual directories was named alias. nce found, it was clearly described d easy to use on each system.

erformance

n absolutely amazed, and very vourably impressed.

y primary Web server has a variety files, as well as a couple gigabytes of gital camera and other graphics. It ns on a Pentium with 128 MB of emory. Response with IIS is sometimes quite sluggish, both when viewed a Netscape Navigator on the server, running on my laptop via a)-base-T network connection.

ith Apache, things seem dramatically ster. My local mirror of my C&NW notos site on AngelFire (at *http://www.angelfire.com/il/cnw/*) which has any small thumbnail photos popped on the screen almost immediately. oth a browser on the server, and on y laptop yielded similar results.

pache running on my laptop yielded npressive results as well. With only MB of memory, swapping is often issue, with quite noticeable delays. uite likely due to the much smaller otprint than for Microsoft PWS, this asn't a problem in my tests and bsequent use.

Compared with Microsoft IIS/PWS

Internet support has always been pretty much of an afterthought with Windows, as they've been playing catch-up ball with the rest of the industry. Microsoft has now gone through four numbered versions of its IIS and PWS products.

The current Version 4 is currently packaged as part of the Windows NT Option Pack. This is available as a large download, almost 100 MB for the full Windows NT package, or about 35 MB for just the Web server for Windows NT or 9x. It is also available on CD-ROM, either by purchase or as a give-away at various Microsoft seminars.

The Microsoft Internet Information Server (IIS) is the full-featured version, and runs only with Windows NT Server 4.0. It is designed to handle a considerable number of concurrent requests, and with a sufficiently powerful computer will support an active Internet Web site.

The Microsoft Personal Web Server (PWS) is a "light-duty" version of IIS. It comes in versions that run on Windows NT Workstation, Windows 95 and 98. It is limited as to the number of concurrent connections supported, and lacks a variety of features and capabilities.

Both PWS and IIS are administered via a GUI (graphical interface) program known as the Microsoft Management Console. When configured appropriately, one can administer any number of PWS or IIS computers from a single computer. This remote administration adds a considerable layer of complexity, but lends itself to large organisations, which are determined to retain central control of computers within an information systems or information technology (IS/IT) department.

Personally I find the GUI interface of both IIS and PWS to be grotesquely complicated and often counter-intuitive. By contrast, the configuration file of Apache is nicely commented and only a minor annoyance.

In terms of hard-disk space, both IIS and PWS are about ten times as big, a few megabytes for Apache, compared with a few dozen megabytes with IIS and PWS.

In terms of main system memory usage, my informal testing on my laptop suggests a saving of a few megabytes. In terms of swap thrash, this has already shown to be a significant benefit.

The capability of IIS and PWS that is not available, or is very difficult in Apache, are those that are particularly Microsoft-centric. This includes MS's ASP and ActiveX architectures.

The Apache Group provides warnings that the Windows versions are not yet as robust as on a UNIX platform. While this is true, these are much higher expectations than one normally can apply to a Windows NT Server in even the best of situations. Quite likely the Windows port of Apache is already considerably more robust than that of IIS (or PWS) in real-world situations.

Documentation

The Apache distribution includes extensive and very detailed documentation. In HTML format, it is over 100 pages and well over a megabyte in size. A typical or complete installation includes the complete Apache manual as a directory named /manual/. (In a pinch, a local browser can also read it from the hard disk copy, even if installation problems were encountered.)

This documentation is remarkably detailed and complete. I found that once I knew what I was looking for, I quickly found everything I needed. The learning curve does seem somewhat steep, but since I was able to get Apache running on two distinct computers, with considerably different configurations, in less time than I'd previously been able to install either IIS or PWS on a single computer, my complaints are quite minimal.

In addition to traditional documentation, Apache also provides complete program source code. This is a direct benefit for those familiar with programming. More importantly, it makes full product details available to responsible authors of third-party books about the product.

A number of third-party books are available. You'll likely find a variety at a bookstore in your community.

Support

Email discussion lists and newsgroups have become the tech support tool of choice for many products. They often have a comprehensive FAQ (Frequently Asked Questions with answers) file. The discussion lists themselves provide a wealth of information, often with an amazing number of people able and willing to provide answers (or portions of answers) to even the most esoteric questions.

The Apache community is particularly responsive to questions and solving problems. Their size and breadth, as well as for many a commitment to Open Source principles, are all working in your favour. In addition, if you want to feel the assurance of having paid support, there are qualified folks available to provide it.

Standards and compatibility

Apache has become as close to a reference standard for Web server behaviour as one might encounter. When the improved capabilities and performance of the HTTP 1.1 protocol were being designed and tested, most of the work was done using Apache as the test bed. This development work quickly migrated into the Apache code base when successful.

Apache not only strives to support strict compliance with Internet standards, but it also includes a number of special capabilities for accommodating known misbehaviour of various popular browsers.

This is quite in contrast with IIS and PWS versions 4.0, which is deliberately broken in a few ways, which I've found critical to my CGI scripts. My experience in fixing these defects, even after I'd found the documentation in Microsoft's Knowledge Base, was of itself several times more complicated than a complete Apache installation.

Recommendation and comments

Once upon a time, about version 2 of IIS and PWS, there might have been some reason for discussion. Although Apache was not then available, other Web servers held considerable promise.

By IIS and PWS version 3, the product had become extremely bloated and complex. Yet that was nothing compared to the excesses of both in version 4.

IIS and PWS do offer ASP and ActiveX support, things costly or difficult or unavailable with Apache. They also offer centralised control via the Microsoft Management Console. If any of these are important to you, then you've a reason to use IIS or PWS.

A Web server is becoming an essential tool for many computer users. Often they have modest amounts of information, perhaps accessed infrequently, but still critical to the organisation. Apache is an ideal choice for these applications. It has a small footprint, is frugal of system resources, yet fully-featured in whatever ways are important to you.

At the other extreme, when a high-performing Web server is needed, such as for an organisation's high-traffic public Web site, Apache is also the server of choice. In these cases, however, Windows NT quite likely is not, and Windows 95 and 98 are out of the question. Partly due to issues of Apach and further of issues of NT itself, several UNIX alternatives are advantageous.

My only reservation is the technical complexity of the documentation. But a few good cookbook examples, perhaps a good third-party book, should easily resolve these challenges.

I'd recommend Apache highly for a personal Web server. I'd also recommend Apache for the public Web site for a corporation or organisation, with the suggestion to seriously consider UNIX rather than Windows NT, for both performance and robustness reasons.

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Harold A. Driscoll is a frequent contributor to *Hard-Copy* and other Chicago Computer Society activities. Email address: *harold@driscoll.chi.il.us*

Book review

» *Ash Nallawalla*

Apache—The Definitive Guide, 2nd Edition

Apache is the leading Web server platform, not necessarily because it is free, but because it is good. At Melb PC we use it on our machines, as do just under 50 percent of sites around the world.

Apache—The Definitive Guide is an excellent reference for Web site administrators. The enclosed CD-ROM provides copies of both UNIX and Win32 implementations of Apache server and a working example of a configuration that grows in complexity as the book progresses. Ben Laurie is a member of the core Apache developer group, which increases the credibility of this book.

The book is structured in the form of a sample site. Chapters include:

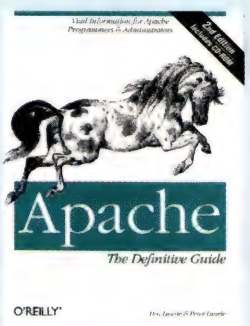
- Obtaining and compiling the server
- Configuring and running Apache on UNIX and Windows systems
- CGI programming
- Authentication and security
- Indexing, redirection, proxies, and server-side includes
- Logging
- The API and writing Apache modules

The Second Edition is a complete revision of the original book. New features include:

- Coverage of the new features of version 1.3.3
- Documentation of the Win32 support
- A quick-reference card covering version 1.3.4
- A reworked and expanded index.

The authors have done a good job of covering the basics, such as explaining TCP/IP, how the client and server components work, setting up a simple server, and so on. Then they get into detail, such as virtual hosts, directives, and blocking access (which will be essential reading for Australian administrators under the new legislation.)

Every Web site administrator should have a copy of this well-written book—another example of the O'Reilly quality.



Ben and Peter Laurie: *Apache—The Definitive Guide, 2nd Edition*
ISBN
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369 pages
Published by O'Reilly
RRP: US$34.95

Letters to the Editor

missing mate

» *Bob Knight, (bobk@globalnet.co.uk)*

wonder if through your magazine you ight be able to help us in a search for a ery old friend. Pilot Officer **Wally Spurr** om Melbourne served with the RAAF. He ew with my brother at an Air Gunnery hool during 1943 in Evanton, Scotland. great friend of my brother, "Aussie" was lopted by the family and he spent all his aves with us at our house just outside anchester. The last we heard was a card om Egypt, we assumed he was on his ay home. Maybe a few lines in your mag uld perhaps find "Aussie" or a member his family, or someone who knows of e family. He was a great guy and has ever been forgotten, any news would be a ear miracle.

evelopers' register

» *Charles Herz*

s has already been said, the membership Melb PC Group is so diverse in interests at it is difficult to contact anyone with a milar interest.

y interest in computers is purely for pro- ssional purposes—Bookkeeping and ccounting. Having learnt to program, develop my own programs, which I use my bookkeeping and accounting work.

y experience in using readily available ver-the-counter programs has been, to say e least, frustrating and generally dis- ppointing. Over the years I realised that rograms for the purpose of bookkeeping nd accounting as well as general financial rposes can take many varied forms.

lany of the programs available have been t up by people who have little or no nowledge of either bookkeeping or ccounting and have have brought in rminology which has no meaning to ther bookkeepers or accountants. On the ther hand there are lots of developers ho set out to write programs claiming at the user need not have any knowledge f either bookkeeping or accounting.

lowever, a program can only facilitate aking bookkeeping entries. To achieve e desired result a knowledge of book- eeping and accounting is essential.

Acquiring knowledge of bookkeeping and accounting, now that computers are here, can take a lot less time than it did in the past. Much of the time taken to acquire this knowledge was taken up in doing exercises in the practical work.

Today the computer automatically computes the data entered and even produces the records as well as the reports. The end user needs to know what he wants to achieve and, therefore, must learn how to achieve the desired result.

To cut a long story short any program for this purpose requires servicing. An unserviced program for bookkeeping and accounting will result in frustration and failure for some users.

Every developer brings something unique to their programs; some ideas are good and some "could be better". All developers must sell their products—without sales they cannot survive.

It is for this purpose that I am writing.

I would like to set up a register of people engaged in similar and complementary activities who feel that they have spare capacity. There must be many developers who are writing commercial programs but can't get them marketed. Likewise there must be many program sellers who wish that they had a broader range of products to sell. By the same token there must be many users who would wish for a better program to use.

The purpose of the register is to bring these elements together to interact with one another. Not being on the Internet I am afraid that contact can only be made by telephone or mail at the present moment.

I wish to hear from developers, sellers, users, Internet users, as well as anyone who feels that they may benefit from this sort of association.

Developing programs is a never-ending endeavour. Just like any machine, it requires improvements and refinements continually. And just because there are programs available it does not mean that better programs cannot be developed and sold.

As far as users are concerned even without knowledge of bookkeeping and accounting there may be people who just wish to enter data under supervision, they also are able to contribute and I would like to hear from them as well.

[*Ed: Charles supplied his contact details. I have not published them because I believe that interested people should meet initially under the auspices of a Melb PC SIG, such as the Programming SIG.—AN]* □

The Pecten: An intriguing sculpture

Ken Holmes

As you swing from Wellington Parade into Spring Street, your passengers (you are too occupied with traffic) will note a largish arrangement of curved metallic panels, on the forecourt of the corner building, which suggests the shape of a seashell. Perhaps that is the Shell building? An even larger fanned, facetted column of polished granite blocks, supporting a wide portal in front of the entrance, also suggests the structure of a seashell. You might well arrange your life to one day place yourself in the vicinity, on foot, with time to contemplate the sculpture and, indeed, Mr Harry Seidler's acclaimed building. Mr Seidler has granted his kind permission to publish the images here, based on the two structures.

At first sight of the sculpture, different people may react in different ways. Some may prefer to accept it as a piece of modern art, perhaps too geometric for their tastes, with some vague symmetries too difficult to fathom. Others would feel the challenge to discern the system behind its geometry. Even a cursory inspection reveals that, from two directions, you see an extremely formalised shape of the Shell Pecten, or Scallop, considered to be one of the most widely recognised commercial emblems around the world. The sculptor, C O Perry, deserves full praise for his ingenious transformation to three dimensions of the two dimensional shape.

Figure 1 is a wireline stereo to illustrate the shape in its most symmetrical position which makes it easier to see that it actually has rotational symmetry, in that it is the same if rotated 180 degrees about the vertical axis. Also, we see the upright shape of the pecten in the frontal view and can see that the side view is an inverted pecten. The basis of the structure is two semicircles about six metres in diameter, crossed at 90 degrees and joined by concave, twisted bands. The surface in each quadrant is divided into four strips, with two alternate ones present and the other two absent. Some years back, I produced a similar diagram but had

Either Figure may be viewed in 3D by placing a mirror edge on to the centreline and facing left, and nose on other mirror edge. Look at right half with right eye and at refection of left half in mirror with left eye.

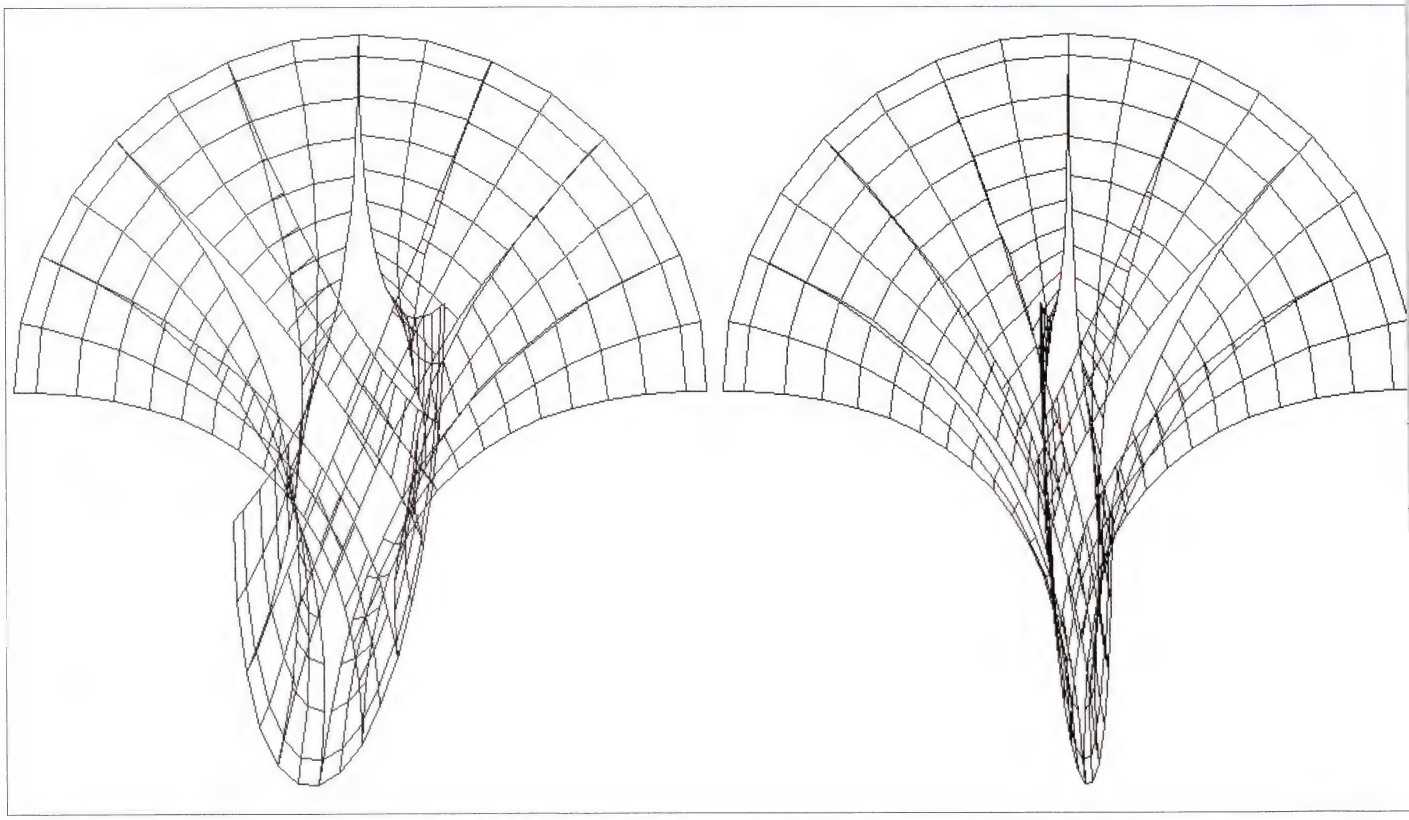


Figure 1

uch difficulty defining the edges and viding the strips into smaller ctangles. Any maths seemed too umsy and did not easily capture the iape. Playing with 3D Beziers for the cent boat articles made me suddenly alise this was an effective solution, ough not necessarily that used by the tist; possibly a pure circle would have en easier for manufacture. Each edge the strips runs between points on ch semicircle which provide the nchors" for a three-point Bezier and e centre of the encompassing sphere ovides an obvious "handle" to draw e curves inwards. The strips seemed o concave, so the "handles" were mply moved out a little from the ntre.

/e need only calculate points on two rips starting near the end of one semi-rcle, and curving off to opposite sides ar the centre of the other semicircle. fter recording these, whether on the ireline plot or in the file to be used ter for a raytracing, we get the other x strips by the following steps:

Rotate 180 deg. about the vertical axis. Record

Rotate 90 deg. about the vertical axis. Invert. Record

Rotate 180 deg. about the vertical axis. Record.

The recursive Bezier process conveniently divides the curves into equal segments, 17 in this case. (OK! The end ones are half size.) With a Bezier also down the centre of each strip, we get 54 points and 34 (twisted) rectangles in each of the eight strips. The rectangles in each strip must be divided into 68 triangles to feed to the ray tracer, so the C++ program writes a 30 KB ASCII file including the 272 triangles for the 8 strips in the form — Triangle { <n, n, n>, <n, n, n>, <n, n, n> } where "n" are <x, y, z> co-ordinates of three points. A small utility is used to convert these to "smooth triangles", which include the vectors at right angles to the surface at each point, to allow POVRay to render a smooth surface without faceting.

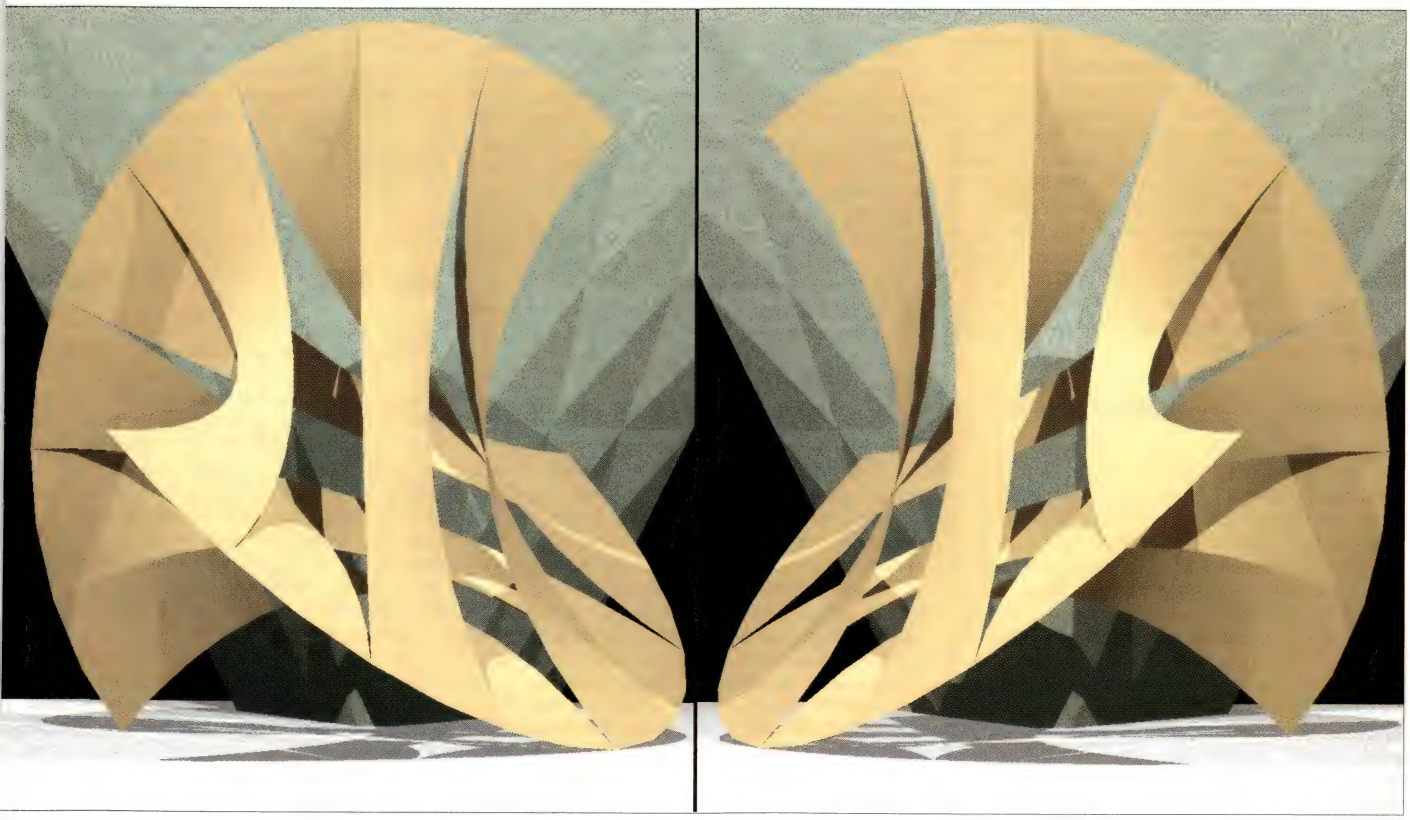
Figure 2 is the resulting ray tracing, where the structure is laid over at 45 degrees to match the actual sculpture. The strips are actually 10 cm thick, but this picture shows a single surface only as we are mainly interested in the overall geometry. The tracing covers 900 x 1012 pixels for each eye view and for each pixel the calculation must find only those triangles intersected by the line from the eye to the pixel, select the nearest, check the lighting (or shadow) on that intersection point and its colour and intensity, and colour the pixel.

The fanned column in the background is not in its true relative position and this view shows only five of the eight layers of granite blocks. The surfaces are twisted and the quadrilaterals are divided into plane triangles using the upward/outward diagonals, which provides a fan of curved lines in harmony with the overall shape.

Calculating co-ordinates of corner points is easy, but every block has a different shape so we can imagine the challenge of cutting, polishing and erecting this structure.

Of course, it would not be put in the same league as Gaudi's Sagrada Familia cathedral in Barcelona, under construction for 70-odd years with perhaps the same again to completion. It incorporates a fantastic variety of structures of complex, organic shape with virtually every element a distinctive shape.

Its detail has mainly been planned by manual draughtsmen, in conjunction with modellers on a large model in the basement keeping just ahead of the builders. Only in recent years has Computer Aided Design taken a place in the process and one can appreciate how useful it will be. Gaudi left a legacy of just plain hard work and they need all the help they can get. □



igure 2

MELB PC USER GROUP

GROUP SERVICES

Glenn Webster

Shareware/Freeware library update

Updates

Melb 1235 PKZIP for DOS v2.50

PKZIP 2.50 for DOS is an easy to use yet powerful .ZIP archive manager that has been designed and engineered by the originators of the .ZIP file format. PKZIP's command line interface enables you to quickly and easily accomplish both simple and complex archiving tasks including the compression and uncompression of files, the creation of self-extracting .ZIP files, and the spanning of .ZIP files across diskettes. This version provides better file compression and it supports Win 95/98 (DOS 7) long filenames (PKZIP, PKUNZIP and PKSFX only). Long file name support can be disabled or enabled as required. PKZIP/PKUNZIP will use EMS memory to allow handling of .ZIP files with up to 16,383 files in them. PKZIP will use 32-bit protected mode compression code if DPMI is present, providing significantly faster and* somewhat better compression. Other options enable you to format high density diskettes in extra high density diskette drives when spanning archive files. PKZIP for DOS is intended for use on DOS 2.0 or later running on an 80x86 or Pentium processor. A comprehensive tutorial is provided with the registered version. Registration for individual use begins at US$47. Site licences and other licences are available.

Melb 2655 NetMon v2.0 (Win95)

NetMon is a replacement for the modem lights program provided by Microsoft in Win 95. This program replaces the LIGHTS.EXE file in your SYSTEM directory of Win 95. You can use NetMon to see the performance of your Internet connection. When NetMon is activated, it collects and stores data about the throughput of your Internet connection. This information can be viewed by double-clicking on the modem applet in the Win 95 System Tray. The display shows the rate of the received data in red and the rate of the transmitted data in blue. This update adds support for the V.90 standard and corrects some minor bugs. Since NetMon is designed to operate on a wide range of Internet connections, the upper range of the graph is updated dynamically. NetMon requires Win 95 or later. Regn US$10.

Melb 8919 mIRC 32-bit v5.31T

mIRC attempts to provide a user-friendly interface for use with the Internet Relay Chat network. The IRC network is a virtual meeting place where people from all over the world can meet and talk. All you need to do to use IRC is to connect to a server, join a channel, and chat. mIRC will guide you through these initial stages and hopefully you will be chatting in no time. If you get stuck, or if you want to find out more about a certain feature, just click on a Help button in a window or browse the Help file. You should find lots of hints to help you out. As you become more experienced you can also start configuring mIRC's features to suit your own needs and tastes. Features such as colours, fonts, function keys, aliases, popup menus, scripts and sounds are able to be configured. This update is a major bugfix release, correcting over 150 errors which occurred on some types of machines. mIRC requires Win 95 (or later) and a connection to the Internet. Regn US$20.

Melb 8963 ZTree for Win 95 v1.41

ZTreeWin is a text-mode file and directory manager for Win 95/98 and NT. It has been developed as a native Win32 alternative to the DOS program XTreeGold, since its makers have ceased any further development. ZTreeWin should provide all the functionality that you are so accustomed to, while avoiding all of the 16-bit DOS-imposed limitations. It uses around 400 KB of memory, and it will allocate and free blocks dynamically as required. The default video mode is 25x80, but you can select 43, 50 or 60 lines by 80 columns if desired. ZTreeWin uses Win32 APIs to avoid several of XTreeGold's limitations: it doesn't hog the CPU while waiting for keyboard activity, trying to log an in-use device will be dealt with gracefully, directory grafting works, long file names are supported, and you can copy and search open files. The program provides flexible support for many archiving programs, but you must have third-party archiving utilities, such as ARJ (Melb 1883), PKZip (Melb 1235), RAR (Melb 9079) and WinZip (Melb 9303) available in order to use these archiving features. This version provides many new features, including ARJ SFX and RAR SFX support, mouse support for file positioning with scrollbar sliding and double left-click to open the current file and a ruler function in the viewer. Single-user registration is $A45 (from within Australia) and this provides unlimited use (including all future versions and upgrades).

Melb 9050 CuteFTP v2.8 (32-bit)

CuteFTP is one of very few programs that enable novice users to utilise the capabilities of FTP without having to know all the details of the protocol itself. The strongest point of CuteFTP is its ability to gather almost every available bit of information about the files and directory structure of a remote system and present it to the user in an easy-to-use File Manager style browsing screen. CuteFTP will also keep data transfers to a minimum by means of storing all the data it can in a temporary file. This update corrects minor bugs in the registry entries and improves transfer efficiency. CuteFTP requires either Win 95/98/NT4, some form of Internet connection (modem, ISDN, cable or network) and 4 MB of RAM. Regn US$30.

Melb 9189-9190 Gator Edit 32 v2.09 (2-disk set)

Gator Edit is a powerful but easy-to-use text editor. It can open up to 100 files simultaneously as well as handle large text files. Some of its features include an integrated file finder, bookmarking, spelling checker, thesaurus, ROT13 encoding/decoding, extensive print options and a private clipboard for retaining frequently used text and phrases. Other features include a window manager to track open files, drag and drop toolbars, a powerful file tracker engine tool, and literal and absolute block fills. Gator Edit's unique Auto Sync scroll feature simultaneously scrolls all of the files on screen at the same rate for side-by-side comparisons. You can import and export Unix, Mac and DOS text format files. Gator Edit includes extremely thorough documentation and it is ideal for all of your text editing requirements. This version corrects minor bugs from the previous program releases. It requires Win 95 or later and 8 MB of RAM. Regn US$20.

Melb 9246 GetRight (32-bit) v3.3.

GetRight is an Internet Download Manager. It has ma configuration options and features to suit users from t most novice user who just wants to download a file, the most sophisticated power user who wants to cont every feature to suit their exact needs. The program c gracefully recover and resume from many errors th happen while downloading files. It has been tested a successfully recovered from turning off the comput unplugging the modem from the wall; and, someo picking up a telephone extension; all while downloadi GetRight can be scheduled to start downloading at selected time by dialing your Internet Service Provic (ISP) when it is time to make the connecti downloading the files, then disconnecting the mode and even turning off the computer when it has finish downloading the files. GetRight can be set up to build list of downloads to be completed later. It can even au matically calculate and track alternate addresses fo file, and then ping the servers to find and transparen switch to the one that should offer the best performan for downloading. GetRight can process a web page find all the files available so you can quickly mark t ones you want to download. You just drag-and-drop lin from your web browser to GetRight. Configurable optio provide for setting directories for saving files by file typ setting a list of user names and passwords for loggi into servers that need them, and sending each file to t virus scanner of your choice when downloading h finished. This update adds the ability to search FTP sit to find other addresses where a file can be obtain from. GetRight integrates into both Netscape Naviga or Communicator and Microsoft Internet Explorer (4.0) using it is seamless with your web browser. GetRig requires Win 95/98/NT3.51 or later. Regn US$18.

Melb 9266 WinAmp v2.2

WinAmp is a Windows-based audio utility. It suppo both MPEG-2 and MPEG-3 audio streams, and it c manage multiple CD-ROM drives mounted in the sar system. Other types of audio streams, such as WAV a MIDI, are also supported, though they are not effected the built-in graphic equaliser. The graphic equalis provides you with the ability to alter the frequen response during playback. Winamp includes a playl editor and creator that you can use to select multi files (to play at once). These can be a mixture of au types. The program also includes Nitrane, an MPEG au layer decoder for better sound playback. WinAr supports special plugins and skins, which can be us to customise the player to your preferences. The Audio player component of WinAmp also utilises t Internet's CD-DataBase (CDDB) for retrieving track a song information. This update adds the new functional to play streaming MP3 audio from servers across t Internet. It requires either Win 95/NT 4.0 or later, Windows-supported sound card with the drive correctly installed, 16 MB of RAM, and a VGA or bet graphics card and monitor. Regn US$10.

lelb 9392
Download Wonder (32-bit) v1.43

wnload Wonder is an intuitive, easy-to-use download nagement tool. It works seamlessly with Microsoft ernet Explorer and Netscape Navigator to store file-ated data as you download files from the Internet. th the program running in the System Tray, as soon your browser begins a download of any file type or tension you define, Download Wonder will spring into tion, downloading the file and prompting you, so that an store, track and organise everything you'll want to ow about the file. You can track the file name, scription, notes, up to 3 keywords (that you specify to lp you remember the file), category, folder to store it the web site where you found the file, the file link URL ere you downloaded it from, and the date, time and e of the file. You can use Download Wonder to resume errupted HTTP downloads from the point of interruption, wnload multiple files simultaneously, download files to mpletion (even if you close your browser) and keep on owsing while your files download. You can revisit the b site from which you downloaded a file, re-download file (without your browser running), run or execute wnloaded files, open or unzip and virus scan down-ded files. Download Manager can launch Windows plorer and jump to the folder in which you've stored a wnloaded file. It helps you get organised by providing nted Quick Lists and user-defined, Custom Reports of ur downloaded files. Download Wonder requires Win or later, an Internet connection (to intercept browser wnloads) and either Internet Explorer, Netscape vigator, or another Mosaic-based browser. Regn US$30.

lelb 9393 MP3Spy v1.0

P3Spy is a new program from the creators of Game-y, and it is designed to change the way that music is tributed online. Through the rapidly developing tech-logy, it is now possible to stream MPEG-3 audio files er the Internet. MP3Spy will help you to find MP3 rvers from all over the globe, and it enables you to en to CD-Quality music across the Internet. It also ludes a chat program that you can use to communi-te with other listeners from around the world who are cessing the same servers that you are. You can search y of the predefined categories or an individual category, m Classical to Metal. MP3Spy requires Win 95 or er, 16 MB of RAM, a sound card, anf Internet connec-n and WinAmp (available on Melb 9266). Regn US$20.

lelb 9394
The Rosenthal Utilities v31/3/98

e Rosenthal Utilities is a "must have" collection of lities that you can use to get your system working ht and keep it that way. The collection consists of ANER (a disk drive cleaner) that will safely and ectively removes debris (microscopic foreign particles, t, dust, oxides and smoke) from the delicate read/ ite heads of floppy disk drives. A special, **non-rasive**, cleaning diskette and solvent is available from senthal Engineering, for use with this utility. However, ANER may be run without the special cleaning disk for monstration and evaluation. RCR (Rosenthal Conflict solver) combines hardware and software diagnostics identify, resolve and prevent all PC system DMA and conflicts for DOS, Windows, Win 95/NT and OS/2. All mponents, from the earliest PCs to todays most phisticated plug-and-play components, are supported en when systems mix old and new technologies. R-RMAT (Rosenthal Format) replaces the standard floppy sk format so your system no longer hangs during start when the diskette is left in the A: drive. RSW osenthal System Workout) confirms the reliable perfor-ance of new or upgraded systems and/or when changes e made, such as installing new hardware or software, by repeatedly exercising thousands of low level tests. Difficult problems, such as intermittent, marginal performance errors and conflicts are revealed. Diagnostics conducted continuously over an extended time are recorded as a text report file. Beginners can use this program to generate a report with the sophisticated information valuable to more advanced trouble shooters. Year 2000 Compliance is enforced each time you power on your system when you use R-Y2KFIX (Rosenthal Year 2000 Fix and CMOS/Clock Battery Monitor). Its tests and adjustments are performed independent of the ROM BIOS, real-time clock (RTC) or system clock versions. This utility monitors and displays a report about the RTC and CMOS battery condition in addition to assuring you of proper calendar function beyond 2000. SYSMON (Rosenthal System Monitor) evaluates your hardware and configuration each day during start up by testing and extensively monitoring a number of performance and security indicators and maintaining a record of changes. These professional diagnostics are automatic enough for beginners to use. UN_DUP (Rosenthal Un_Duplicate) finds any files that are redundant and may be removed. The path statement sequence order is reorganised based on the actual directory structure of the disks to optimise access times for the most efficient search. You can use this utility to optimise larger hard drives and make the most efficient use of small ones. UNINSTAL (Rosenthal UnInstall) tracks installations to remove unwanted additions and restore changes. It can restore modified Windows and DOS programs, files and directories and Windows Registry (USER.DAT and SYSTEM.DAT) and system files (AUTOEXEC.BAT, CONFIG.SYS, WIN.INI, SYSTEM.INI). VIRSIM (Virus Simulator) can safely validate your anti-virus protection and security measures or demonstrate how they work. The utility creates a simulated test suite of .COM and .EXE programs as well as boot sector and memory resident viruses. These programs contain the signatures (only) from real viruses. The programs themselves are not really infected with anything, but contain carefully selected portions of code from their real virus counterparts. The utilities will work with systems running DOS, or Win 3.1 or later. They are available separately or as a special package bundle (not including the disk drive cleaner or the conflict resolver) for a registration fee of US$60.

Melb 9395-9396 (2-disk set)
Dynamic Spelling Bee (32-bit) v1.6

This is a multimedia Spelling Bee which can use either spelling bee lists produced from simple text files or a 22,000 word spelling dictionary from which you can link your own recording to individual words. The dictionary can produce random spelling bee lists and new categories can be added. The program already includes Music, Science, Medical and ten other categories. The dictionary can be set to either US or UK dialect. Spelling lists can be edited easily, ready to use or saved for later. Twenty list examples are included and the complete spelling bee library can be downloaded from the author's web site. The program provides a failure list, a repeat mode, and an auto level mode. The learn mode can display a word, letter by letter, sounding each letter until the word is completed. The program also includes a scrap pad, a browse facility, a dictionary editor, history, statistical information and much more. Documentation is in the form of Windows online help. Dynamic Spelling Bee requires a minimum of an 80486-66 processor running Win 95. You will need a sound recorder if you want to link sounds to the dictionary. Regn US$20.

Melb 9397-9398
Idyle Agenda 98 v1.37 (2-disk set)

Agenda 98 is a complete all-in-one solution for your daily schedules and reminders. It organises tasks, projects, alarms and appointments. It's like having a virtual secretary making sure that you are on time to complete your tasks and appointments. Agenda 98 can even E-mail, print or preview reminders at your will. It will even stick notes on the desktop to remind you of the things you could forget easily. The program includes a calendar and comes with a complete and detailed help file. It requires an 80486-66 or faster processor running Win 95 or later, with 8 MB of RAM and 3 MB of disk space. Regn US$20.

Melb 9399-9400
Sonique v1.05 (2-disk set)

Sonique is a new level of audio player that has fused a highly stylised graphical component with a fluid, windowless interface. The result is a program that is extremely full-featured, intuitive and stylish. Sonique also features a wide variety of audio formats which are ever increasing as the online standard for audio. It supports streaming MP3 audio in addition to MPEG, MPEG-2, WAV, MOD, S3M, and it can also play Audio CDs. Requires Win 95 or later, a P-90 or faster CPU, a VGA or better graphics card/monitor, 16 MB of RAM, a sound card and a mouse.

Melb 9401 Absolute Security Standard (32-bit) v2.7

Absolute Security Standard secures the privacy of the files that you keep on your PC, send through E-mail and send over the Internet. It uses strong encryption to protect the confidentiality of sensitive information. It supports passwords using any characters available on your keyboard, and encrypts files from Windows Explorer or the desktop with a simple drag and drop. Its easy to use interface means that there is no need to become involved with numerous dialog boxes. An unlimited number of files and directories to encrypt into one compressed archive. The program performs random stream overwrites to wipe files and the wipe function wipes the filename also. Requires Win 95/98/NT. Regn US$49.

Melb 9402 Folder Guard for Windows 95/98 v4.10A

Folder Guard for Win 95/98 is a software-only security solution for personal or publicly accessible computers. It provides you with complete control over access to files and folders of your choice. You can hide or make actually "read-only" any folder, so that access to its contents will be restricted to all applications including Windows Explorer, Office, DOS programs, common dialogs, etc. Other features of Folder Guard include an optional user validation at logon (which helps protect your Windows files from intruders), flexible control of user access to many resources in Win 95 (such as the Start Menu, Control Panel, Active Desktop, etc), user-specific access rights to files, folders, and other Windows resources that you can configure separately for each user of your computer, password protection and user-dependent configurations. You can prevent some or all users from reformatting local drives and you can have protection from both local and remote access. The easy and intuitive user interface will help you to set up the attributes of the files and folders that you want to protect, and it will help you to control other settings as well. Folder Guard is designed to operate with or without the use of System Policies, on stand-alone personal systems or on corporate networks. Requires Win 95/98. It will not run under Windows NT. Regn US$50.

Melb 9403-9404
Macro Express 99 v1.6A (2-disk set)

Macro Express 99 is a comprehensive macro utility that you can use to automate all of your common tasks. It consists of a macro editor and a macro player. Macros may be activated by Hot Key, Mouse Key (Ctrl, Alt or Shift with mouse clicks), ShortKey, Popup Menu, Timed Schedule or when a window appears. Macros can use the mouse, symbols, date, time, delays, pauses, repeat loops, the clipboard and window commands. Macros may be used globally or for a specific program and they can be grouped into optional "categories". Selecting a category from the category list will display only those macros assigned to that category. An Encrypted

option will playback encrypted text to the user of the program. This is useful for passwords and the like so that people snooping through the program cannot uncover passwords. A Bitmap to Clipboard command enables JPEG (*.JPG) and Windows Metafiles (*.WMF) to be copied to the clipboard. You can save the graphic contents of the clipboard to either a bitmap (*.BMP) or JPEG (*.JPG) file, and you can save or append the text contents of the clipboard to a text file. An E-mail option provides many features including a built-in address list for easy retrieval, the ability to choose one or multiple recipients, CC (carbon copy) and BCC (blind carbon copy) at either macro design time or at macro run time. The text body of the message can be created at macro design time, inputed at macro run time, created from the text contents of the clipboard or created from the contents of a text file. You can choose one or more attachments at macro design time or at macro run time and you can keep a log of all E-mail sent. Macro Express requires Win 95/98/NT with 4 MB of RAM and 3 MB of disk space. Regn US$35.

Melb 9405 Magic Notes for Windows v2.5

Magic Notes is a quick and easy way to organise your notes right on your desktop. You can use the powerful alarm function of Magic Notes to remind you of events. You can play wave or midi files for alarms and the alarm display dialog has a snooze button for alarms. You can customise your notes so that they appear on screen the way **you** want them to look. There is no need to remember to save your notes if you use the autosave feature. Magic Notes includes several functions, such as "Smartfit", to organise your notes on screen or even hide them temporarily from your desktop. A simple password lock/unlock feature will prevent others from viewing the contents of a note. An "Export as text" option will save the contents of a note to a file. Other options include find/replace text inside a note, shortcut keys for inserting the current time and/or current date, and support for entering international characters, such as accents, using the same keys as in Microsoft Word. Magic Notes is even easier to use under Win 95 and NT 4.0 with a taskbar icon for easy access and with added adherence to the look and feel of Win 95. Instructions on using the program can be found in the help file. Minimum requirements for Magic Notes are an 80386 processor running Win 3.1 or later. Registration of A$20 provides free lifetime upgrades and free technical support.

Melb 9406 PaneKiller (32-bit) v1.32

PaneKiller is a Windows navigation utility that will help you to get to your documents and applications faster than ever before. It gives you easy, configurable, menu-like access to the Desktop, My Computer, Control Panels, your hard drives... to every document and application available on your computer, all from the Windows taskbar, without filling your screen with folder windows. PaneKiller promotes a true document-centric view of your computer, because it lets you organise your files the way you want to, independent of your computer's actual directory structure. Or you can just use it to get at your files the way they're already stored, only faster. It's your choice. PaneKiller is as easy to use as the Start Menu, but it is much more flexible and customisable. In fact, you can even use PaneKiller as the Start menu. On-disk documentation explains the many features and options available in this utility. PaneKiller requires Win 95 or later. Regn US$10.

Melb 9407-9409 Perfect Companion v3.0.3 (3-disk set)

Perfect Companion is a system utility for cleaning the registry of invalid keys that uninstaller programs do not remove. The program was designed to be used in conjunction with an uninstalling program that tracks the installation of new software. It will remove invalid Class, Interface and other installed files keys. It will remove any entry that is not valid, contains a non-existent file or an invalid path. If the registry entry contains an incorrect path, or an invalid quotation mark, comma, period, backslash, or other invalid character, the key will be removed. An undo file will be created each time the program is run. The Registry Cleaner will automatically repair the font folder and the Recycle Bin folder on rebooting after use. Perfect Companion also contains a file system Snapshot utility for finding files that have been modified during the installation of new software. This utility was designed to show you which files have been replaced with older versions or modified during an installation. It will also show you which files have been added to or deleted from your machine. It will not remove files that may have been added during an installation. Uninstaller programs should remove the files that they tracked during the installation. The Snapshot utility file can be used then to help you completely remove an installation. Some .DLL files are not removed by uninstallers, so now you will be able to see if a file was added by the software you are uninstalling. Perfect Requires an 80486 or better CPU running Win 95 or later, 4 MB of RAM and 4 MB of disk space. Regn US$30.

Melb 9410 Uninstall Manager v3.00

Removing files from your system is a lot harder than installing them. It is very easy to accumulate megabytes of junk files on your hard disk which waste space, slow down your system and conflict with other software packages. Uninstall Manager searches your hard disk for orphaned files and lists them, with their locations, so you can delete them. It will also show you each time the program has started any files which have been installed since Uninstall Manager was first used. Requires Win 95 or later and 2 MB of hard disk space. Regn US$13.

Melb 9411 Windows Security Officer 98 v3.5

Windows Security Officer enables you to protect and control access to your PC. It offers administrative support for controlling which users can have access to your computer and the level of access they may have. You can deny access to all programs on your PC except for those on a "permitted list" which you create. You can designate the "Administrator" (or more than one) and give them the "Administrator Password." Other users cannot gain access to the computer with the administrator's "user name" only, and they cannot make any modification to security options without the correct Administrator Password. You can give Windows Logon "Users" their own individual, independent passwords. Other features include an "Always Check Password" option, logging of information (to a file) about all access attempts, and modifying the boot options (disable F8 key, safe mode, etc). You can set restrictions for users (your children, for example) without the necessity of registering them as a user, and you can restrict working time for each user, such as between 5 pm and 7 pm for a cumulative time of 30 minutes. An "autorun" feature can start the Windows Security Officer application program before any user enters their Windows login name and login password. Rquires Win 95 or later.

Melb 9412 Serpik Graphs (Win9x) v1.2

Serpik Graphs is a powerful and easy-to-use program for plotting curves and mathematical functions. The program graphs Cartesian (Y(x) and X(y)), polar and parametric functions, implicit functions, inequalities and systems of inequalities, slope fields and graphs of tables. You can view up to 30 graphs in one window. Other features of the program include a multi-document interface, printing capabilities and calculus features. It supports the English, Italian, Dutch and Russian languages. Requires an 80486 (or later) CPU running Win 95 with 4 MB of RAM and 1.6 MB of disk space. Regn US$20. □

NEWS

News release

One of the most requeste features in the recent *PC Update* survey was computing news. Consequently, here are som edited recent news releases. Please send feedback to *pcupdate@melbpc.org.au*

Sony

Twenty years ago, music listening was revolutionised by the pocket-sized 14-oz Sony Walkman® personal stereo. Introduced in 1979 as the Soundabout, the Walkman stereo altered the way we enjoyed music. Suddenly music could accompany listeners anywhere, anytime: in the car on the train—wherever life took them

Just as music serves as the beat of popular culture, the Walkman persona stereo has become a popular culture icon. It has become part of the landscape of street fashion, and everyday travel accessory, and a statement about one's personal style and even commitment to fitness.

Since its introduction, Walkman portable stereos have been a huge product and marketing success. Led by the Walkman stereo, Sony created a new industry of personal entertainment. Today, millions of portable stereos have been sold. Sony Walkman personal stereos (cassette, compact disc and MiniDisc) sales will approach 100 million this winter.

Stay tuned for further celebrations to mark the 20th Anniversary.

Trend Micro

The destructive trojan worm virus, Worm.ExploreZip (also known as TROJ_EXPLOREZIP), has hit Australia. Trend Micro is offering free protection from the rapid-spreading autospam virus on its website—*www.trendmicro.com.au/housecall*.

"The virus is Melissa-like in that it auto-emails from the user's address book," said Kenny Liao, country manager, Trend Micro. "However, it is much more dangerous and destructive, with the ability to delete critical files.

Compiled by Ash Nallawalla

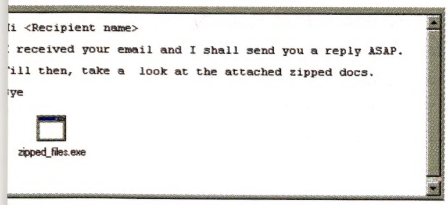
MELB PC USER GROUP **SERVICES**

John Swale

Random access

'he worm virus emails itself out as an ttachment under the filename zipped_files.exe".

Vhat to look for:



the user opens the attachment, the irus searches hard drives C: through Z:, selecting the Microsoft Word, xcel and PowerPoint files, as well as ource code files used by programmers ncluding C++, C and Assembler. It educes the size of these files to zero, naking the data unrecoverable.

Vhen executed, Worm.ExploreZip uses IAPI-enabled e-mail systems to auto-am itself as an attachment, to multiple ther e-mail addresses on the user's ystem.

'he virus will not spread further if the ser is not using Microsoft Outlook, ut files may still be damaged. It works n Windows 95, 98 and NT systems.

'rend Micro have already received calls rom two customers in Australia who eceived the email message. The virus as also been detected in the United tates, Germany, Norway, Israel and ne Czech Republic.

Iow to defend your system against the irus Computers will need to have an ntivirus solution that has been updated o protect against TROJ_EXPLOREZIP.

We strongly advise that all users, vhether they are running antivirus oftware or not, visit Trend Micro's ome page for a virus scan, just to be n the safe side. This is free and can be one from any Web browser," said Mr iao. "This is a very destructive virus nd could cause serious, irreparable amage."

Existing Trend Micro customers can ownload the solution from Trend Iicro's home page and must use attern files 543 or above. □

Questions and answers

Q I have a fax modem and I receive faxes with unreadable pictures. What can I do to get better images for printing?

A The image quality is a function of the fax software and the free software that comes with the modem is usually not good quality. You will need to get better quality software that will remove the noise. If you save the images as JPEG, BMP or fax, you can use an imaging program to improve the quality.

Q My PC has a SCSI controller on the motherboard. I want to add a scanner and wonder if I should add it to the hard disk drive chain or add a separate SCSI card.

A It depends on the motherboard and the way it is set up. If you want to run the scanner from the on-board SCSI controller, which is ultra-wide SCSI II, create an external port to plug the scanner into. Some SCSIs allow one cable to the hard drives and another to an external connection. An autosensor in the controller will sense if an external device is connected. The scanner is the last device in the SCSI chain.must be terminated.

Q I recently installed a Quantum CR hard disk as my C: drive, moved the old one to D: and installed Win 98. Now the performance is poor. The DMA box was not checked so I checked it, but the next time I restarted the PC it was unchecked again. It is a TX motherboard.

A The TX chipset has Ultra DMA support. Check that it shows up in the BIOS.

Q I have a removable hard drive on my system. I loaded Norton Antivirus and now it objects if the removable hard drive is not present. Can I stop this?

A No. Norton creates its own registry, so if the removable drive is present when you load Norton it will be added. If it is not present then you will all right until you have it in and Norton will detect it and add it to its table.

Q Since I installed Windows 98 I can only read 720 KB disks in my 1.44 MB drive. If I boot to DOS or safe mode I can use 1.44 MB disks. If I go into Explorer I cannot read anything, the drive just keeps whirring. I have an on-board sound card.

A We have found problems with ESS sound cards that have an IDE contoller on the card that needs to be disabled. We have not seen this problem with an on-board sound card. Try installing the latest version of Win 98 and check the Microsoft support site knowledge base.

Q I installed speech recognition on the C: drive and found that I didn't have enough room so I then installed it on D:. Now WordPerfect 8 won't find the files for speech recognition and it is looking for them on C:. There is no entry in Add/Remove programs to uninstall it.

A You will have to try using REGEDIT. Remember that any changes are instantaneous with no warning. So make a backup.

Unanswered questions

Q From Bulent Akkas: I have a annoying problem with my computer. It's Pentium MXX with 32 MB RAM. The computer operates normally but sometimes the system just pauses or jams (but doesn't totally crash) for a few seconds and then resumes again. During the pause I can't move my mouse cursor or do anything until the computer resumes. When the computer is just about to pause I can hear a noise from the computer, it sounds like the power is being turned off from the processor or something like that. And when the computer is just about to resume I can hear another noise, which sounds like power is re-generated from the processor.

Q From Bulent Akkas: I have a Pentium MMX computer, and I wanted to (over-clock) increase my CPU speed from 200 to 266 from the BIOS setup (I got the idea from *PC Update*, July 1999 page 10). However, my BIOS setup does not show my CPU speed and so I can't change it. Are there other ways to over-clock my CPU? Or do I need to update my BIOS version if I can? □

Over to You

Please contact me if you have any comments on the answers given; can provide a reply for the unanswered questions; or if you cannot attend the monthly meeting and would like a question asked and included in this column.

To contact me: write to me care of the office; leave a message on the BBS or telephone me on (03) 9857 5567 AH or e-mail me at *jswale@melbpc.org.au*

Note: Please contact commercial distributors before asking a question here. In all cases mention version numbers.

BRAIN BENDER

Peter's *PC Update* puzzles

Peter Smith

These puzzles can be solved without using a computer—if one bird-brain can write them, another can solve them!

Five of everything

	a	b	c	d	e	
A						24
B						10
C						29
D						14
E						36
	23	22	26	17	25	

	f	g	h	i	j	
F						31
G						19
H						21
I						20
J						21
	14	23	24	29	22	

Wandering words

This puzzle contains a quote from *John Laws' Book of Uncommon Sense*. All the characters of the quote appear in the clues in the bottom lines, each character belongs in the column under which it appears.

Hint

There are 24 words altogether, five of which have more than six letters.

Five of everything

Each of the digits 0–9 occurs five times in the central part of the two grids. The clues mention every time that a digit appears more than once in a column or row. No digit appears adjacent to itself, horizontally or vertically. The numbers to the right and bottom of the grids are the sum of the cells to the left or above.

Across

A. A pair of 7s, no 0s.
B. A pair of 2s.
C. No 3s, no 7s.
D. A pair of 3s, a pair of 4s.
E. A pair of 9s, one 5.
F. A pair of 6s, one 2.
G. A pair of 2s, no 5s.
H. No 3s, one 8.
I. No 2s, no 3s.
J. A pair of 3s, one 7.

Down

a. A pair of 5s, no 3s, one 2.
b. No 0s, no 2s.
c. One 1, one 8.
d. No 2s, one 7.
e. A pair of 9s, one 5.
f. A pair of 3s, no 0s.
g. A pair of 4s, no 5s.
h. A pair of 8s, no 1s.
i. A pair of 9s, no 1s, one 8.
j. A pair of 7s, no 1s.

This month's solutions

Wandering words

Any government that's so powerful it can give us anything we want is also so powerful it can take away everything we have.

Five of everything

	a	b	c	d	e	
A	7	4	7	1	5	24
B	2	5	1	0	2	10
C	5	1	8	6	9	29
D	4	3	4	3	0	14
E	5	9	6	7	9	36
	23	22	26	17	25	

	f	g	h	i	j	
F	2	6	8	9	6	31
G	3	4	2	8	2	19
H	5	1	8	0	7	21
I	1	4	6	9	0	20
J	3	8	0	3	7	21
	14	23	24	29	22	

July's solutions

Wandering words

My decision to become a lawyer was irrevocably sealed when I realized my father hated the legal profession.

John Grisham—
opening words of *The Firm*.

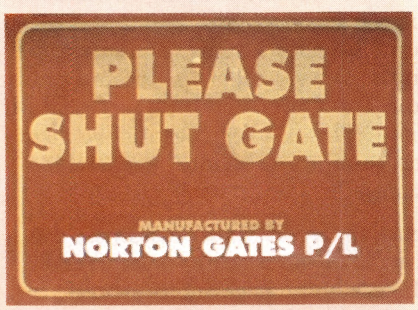
Cryptotext

Between the idea and the reality
Between the motion and the act
Falls the shadow.

T S Eliot

A new partnership

Hardware, but not the sort you might have guessed.



Wandering words

A	N	E	I	W	A	E	N	O	E	O	Y	T	H	H	R	T	W	H	O	T	G	A	E	R
A	U	Y	A	T	V	A	E	G	M	V	P	O	W	E	A	Y	U	S	I	A	O	W	N	W
A	N	L	G	O	C	Y	S	N	S	E	E	U	S	A	N	G	S	L	H	P	V	E	T	T
F	K	T		S	A	L	R	V	I	R	N		T		N	F	T	E	I	C	E	N		

Acknowledgments

Melbourne PC User Group gratefully acknowledges the support provided by the following organisations:

American Power Conversion for the supply of six uninterruptible power supplies for the Group's Communications Centre.

ACA Pacific for the donation of a Diamond Stealth Video card used in the production of *PC Update*.

Computer Rebuilds for the supply of equipment used in the Group's Communications Centre and in the production of *PC Update*.

Hewlett-Packard for a LaserJet 4M printer for administration, and a ScanJet scanner and LaserJet 5Si MX used in the production of *PC Update*.

Michaels Camera & Video for a Kodak DC20 Digital Camera.

Microsoft Australia for many years of contributions and support.

SONY Australia for the supply of equipment used in the production of *PC Update*.

Symantec Australia for many years of contributions and support.

Monthly meeting

All members and guests welcome

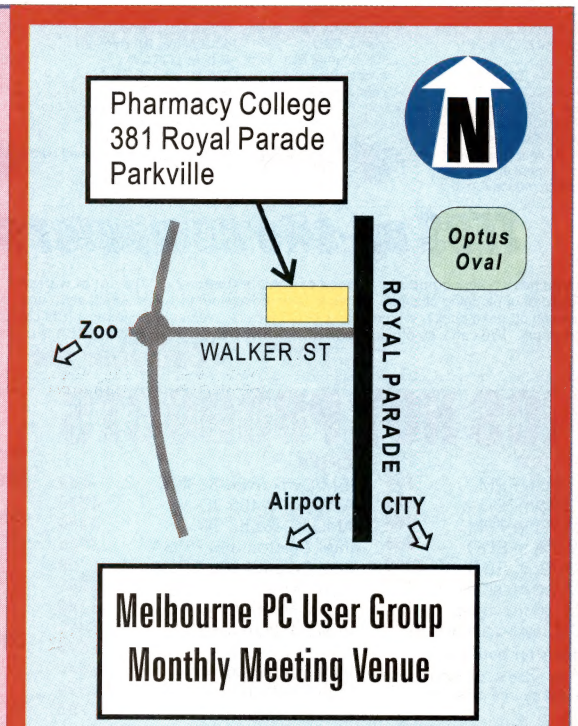
Pharmacy College
381 Royal Parade
Parkville

6.00 pm
First Wednesday each month

Do you have a product that would interest our members?

An average of over 400 members and guests attend our monthly meetings, which provide an excellent forum to introduce and release new products to those who are both users and decision-makers.

Meetings are arranged around planned themes. Members or presenters who are able to assist or contribute are invited to contact the convener, Brian Horman, via the office, on 9699 6222 or e-mail *brianh@melbpc.org.au*



Next meeting: 4 August

The program was unavailable as this issue of *PC Update* went to press. Watch the BBS or *melbpc.general* for details as they come to hand.

Plus:

- The usual giveaways and raffle
- Random access (your chance to get answers to unsolved problems)
- Club news from the President
- Shareware library sales
- Socialising

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Membership

Do you have a problem thinking of gifts for family, friends or colleagues?

The next time you're stuck, why not give them memberships in Melb PC?

PC Update, BBS, SIGs, Training, Internet, Intranet, Dial Help, Monthly Meetings, Shareware, First Aid ... all this and growing.

Anyone who uses a PC will benefit from membership of Melb PC.

MELB PC USER GROUP

Cougar

- **Intel Celeron 366 CPU**
- 128K cache
- Gigabyte LX chipset
- 32M SDRAM
- 4.3G ultra IDE HDD
- 1.44M FDD
- 8M ATI AGP video on-board
- 15" Hyundai monitor
- 40X CD-ROM drive
- PCI 3D sound on-board
- Pair of speakers
- Logitech mouse & pad
- 104 keyboard
- Micro ATX mini-tower case & PSU
- 56K internal PCI voice/fax/modem
- Windows 98
- Vet anti-virus software

$1499

Leopard

- **Intel Pentium II 400 CPU**
- 512K cache
- Gigabyte BX chipset
- 64M SDRAM
- 6.4G ultra IDE HDD
- 1.44M FDD
- 8M ATI Xpert98 AGP video
- 15" Hyundai monitor
- 40X CD-ROM drive
- Creative Ensoniq sound card
- Pair of speakers
- Logitech mouse & pad
- 104 keyboard
- Choice of ATX midi-tower or desk-top case
- 56K internal PCI voice/fax/modem
- Windows 98
- Vet anti-virus software

$2050

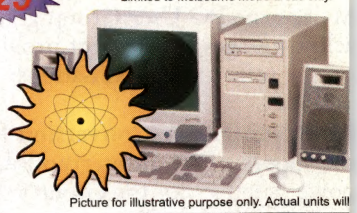
Cheetah-2

- **Intel Pentium III 450 CPU**
- 512K cache
- Gigabyte BX chipset
- 128M SDRAM
- 8.4G ultra IDE HDD
- 1.44M FDD
- 16M ATI Xpert128 AGP video
- 17" Hyundai monitor
- 40X CD-ROM drive
- SB64 PCI sound card
- Genius 3D 200W speakers
- Microsoft mouse & pad
- 104 keyboard
- Choice of ATX midi-tower or desk-top case
- 56K internal PCI voice/fax/modem
- Windows 98
- Vet anti-virus software

$2925

- *Free delivery & setup*
- *2 year parts & unlimi labour warranty!*
- *3 year manufacturer's on-site warranty on Hyundai monitor!*

*- Limited to Melbourne metro areas only.



Picture for illustrative purpose only. Actual units will

TECS on-site computer service

Do you have a sick computer in need of some attention? It's out of warranty and you don't know anyone you can trust?
Afraid of unplugging all those cables to take the system to your nearest shop and then having to remember which plug goes where when you get it back? Why not give TECS a call? We can service most IBM compatible PC's on your premises, expertly and efficiently. We can also provide networking solutions. You know that TECS is one name you can TRUST.

Call your local TECS store for details!

intel inside pentium II

TECS HOT PRODUCTS

MEMORY

8M 72pin FPM	$35
8M 72pin EDO	$29
16M 72pin FPM	$65
16M 72pin EDO	$55
32M 72pin EDO	$115
32M 100MHz SDRAM	$55
64M 100MHz SDRAM	$95
128M 100MHz SDRAM	$189

Memory for notebooks
Call for price & availability.
We can source most types.

IDE HARD DRIVES

4.3G Quantum	$189
6.4G Quantum	$229
8.4G Seagate	$235
8.4G Quantum	$275
10G Seagate	$329
10G IBM	$335
10G IBM 7200rpm	$409
13G Quantum	$379
15G IBM	$475
20.3G IBM	$649

CPU's

IBM/Cyrix 6x86-333MX	$89
AMD K6-2-400 3D	$299
AMD K6-2-450 3D	$450
Intel Celeron 366 PPGA	$165
Intel Celeron 400 PPGA	$199
Intel Celeron 433 PPGA	$269
Intel Celeron 466 PPGA	$345
Intel Pentium II 400	$419
Intel Pentium II 450	$615
Intel Pentium III 450	$630
Intel Pentium III 500	$1099
Intel Pentium III550	$1755

MOTHERBOARDS

Gigabyte ALI AGP AT 512K	$145
Gigabyte AX ALI ATX 512K	$155
Gigabyte LX Socket 370 AT	$155
Gigabyte LX Socket 370 ATX	$155
Gigabyte BXC ATX	$195
Gigabyte BXE ATX	$229
Gigabyte BX ATX Ultra SCSI	$509
PPGA/SEPP adapt.	$29

Upgrade Special!

Give your computer a new lease on life by upgrading!*

Offer 1:
- IBM/Cyrix 6x86-333MX CPU
- Gigabyte ALI chipset AT motherboard
- 32M SDRAM
- 4M S3 Trio 3D/2X AGP video card

$375

Offer 2:
- Intel Celeron 366MHz CPU
- Gigabyte EX/LX chipset AT M/B
- 64M PC100 SDRAM
- 8M Intel i740 3D AGP video card

$560

Prices include installation!

* - Subject to suitability.

Colour flatbed scanner

Specifications:
- A4 size
- Up to 30-bit true colour scanning
- Scan from 75 to 9600DPI!
- fast single pass scanning
- TWAIN compatible

* Parallel Port interface. Ideal for notebooks!

$145

Iomega ZIP drives

External parallel **$219**

Internal ATAPI IDE **$149**

LS-120 disk drives

Features:
- 80 times the capacity and 5 times the speed of conventional 1.44M floppy drives.
- Read / write compatible with standard 1.44M and 720K diskettes.
- Each LS-120 diskettes will hold 120M of data Ideal for storing large download files from the internet.
- Industry standard ATAPI IDE interface.

LS-120 diskettes: $19.95

$169

ATI graphics products

RAGE XPERT128 **$335**

- 16M of memory.
- 128-bit graphics engine and memory access.
- Ideal for SOHO based PC's.

RAGE MAGNUM **$395**

- 32M of memory.
- 128-bit graphics engine and memory access.
- Hardware DVD decoder.
- Ideal for graphics pros.

$449

- 32M of memory.
- 128-bit graphics engine and memory access.
- Hardware DVD decoder.
- TV out for BIG SCREEN gaming experience.

MITAC6033 Notebook

Features:
- Genuine Intel Pentium II 333 CPU
- 64M RAM
- 6.4G hard drive
- 12.1" TFT active LCD screen
- 1.44M floppy drive
- 24X CD-ROM drive
- Carry case
- Windows 98
- SmartSuite 97
- IBM World Book 98

$3999

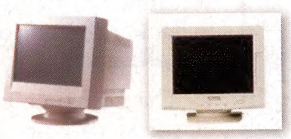
3 Year Warranty & 1 Year International Service!

Modems

Aztech V90 int. PCI	$85
Aztech V90 ext. USB	$115
KTX V90 int. PCI	$75
KTX V90 ext.	$119
Banksia V90 ext.	$225
Netcomm V90 int. PCI	$89
Netcomm V90 ext. Ultra	$275
Netcomm V90 ext. USB	$289

Colour Monitors

3 year manufacturer's on-site warranty on all Magtron, Hyundai, Mirage & LG monitors!



14" LG 44i	$285
15" Magtron CM-15JN	$335
15" Hyundai 5854	$335
15" LG 55i	$335
15" LG 57i	$359
15" Sony 100ES	$579
17" Samtron 70E	$575
17" Hyundai	$559
17" Sony 200ES	$959
19" Viewmaster .26dp	$1029

USB connectivity!

USB to IEEE-1284 printer cable
Connect your existing parallel printer to the USB port! Frees up the parallel port for your ZIP drives and / or your scanners. Allows current Microsoft Windows printer drivers to print seamlessly to USB.

$65

4 port USB HUB
Offers instant hot swap Plug & Play connectivity for up to 4 devices. HUBs can be cascaded to connect up to 127 devices.

$11

PCI to USB host adaptor
This adaptor provides 2 USB ports for all PCI slot motherboards that don't have a USB interface.

$59

N.B.: USB connectivity requires Win95b(OSR2) with USB supplement or Win98 operating system.

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Tecs

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Retail outlets:	City: 305 Latrobe St.	Ph:(03)9602-3499 Fax:(03)9642-8551
	Coburg: 311 Sydney Rd.	Ph:(03)9383-7511 Fax:(03)9383-7896
	Clayton: Cnr. Blackburn & Wellington Rds.	Ph:(03)9562-9501 Fax:(03)9562-9261
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Head office / warehouse:	Nunawading: 5 Silver Grove	Ph:(03)9877-7071 Fax:(03)9877-7081

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